



BULLYING IN PROFESSIONAL SETTINGS: CAUSE OR EFFECT OF STRAIN AND COPING STRATEGIES? FIRST STEPS TOWARD A LONGITUDINAL APPROACH

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Abstract

So far, studies (Quine, 2001; Salin, 2003; Fox & Stallworth, 2005; Garish & Wilson, 2010) have shown that cross-sectional designs couldn't emphasize the direct relationships between workplace bullying exposure and its impact on targeted employees' symptoms of strain and coping strategies. The present article investigate cross-lagged relationships between workplace bullying on one side, and coping strategies and strain on the other side. 73 Romanian employees from private firms participated at data gathering stages on workplace bullying exposure, coping strategies and strain symptoms in 2012 as well as in 2013. The results have shown that workplace bullying measured in 2012 is positively and significantly associated with physical strain measured in 2013. Furthermore, workplace bullying measured in 2012 is positively and significantly associated with mental disengagement measured in 2013. Moreover, results have shown that behavioral disengagement in 2012 was positively and significantly associated with workplace bullying exposure measured in 2013. These main findings have indicated long-term effects of workplace bullying exposure. If on the short-term, there are no significant associations between workplace bullying exposure and employees' strain and coping strategies, on the long term, some effects can be emphasized with the aid of cross-lagged panel design. Thus, long-term exposure to workplace bullying is associated with later symptoms of physical strain and mental disengagement, and behavioral disengagement is positively associated with later manifestation of workplace bullying acts. In other words, the long-term effects of workplace bullying can be experienced at the level of physical strain as well as

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mentally disengagement behaviors, and a previous state of behavioral disengagement will act like a trigger for later workplace bullying acts.

Keywords: workplace bullying; mental and physical strain; coping strategies; cross-lagged panel design

Introduction

The majority of psychological studies addressing workplace bullying phenomenon have implemented cross-sectional designs in order to investigate the relationships between workplace bullying and its subsequent consequences (Quine, 2001; Salin, 2003; Fox & Stallworth, 2005; Garish & Wilson, 2010). Using this type of research design, specialists in the field are drawing conclusions in terms of causes and effects by calculating regression coefficients but, in the majority of the cases, these types of statistics don't manage to emphasize accurately the real relationship existing between two psychological variables. In most of the psychological studies, researchers are taking into account variables as predictors or as predicted based on previous researches but, they don't have an accurate technique to analyze which variables can be studied as independent variables and which ones can be studied as dependent ones.

In the past 15 years, more and more researches have approached the technique of quasi-experimental or even experimental designs in order to emphasize the causal relationships between two or more psychological variables. Even so, studying a causal relationship through quasi-experimental or experimental designs it may be difficult because it implies some deontological aspects or even more ethical aspects which may be not respected, indicating real negative effects on participant's well-being and psychological health. This is the case of workplace bullying studies in which is very hard to use quasi-experimental or experimental designs because is un-ethical to produce these types of behaviors in the laboratory in order to see its impact on participants' health state. There is another way for us, and that's to have two groups of participants (one experimental group - those employees who have been detected as being previously exposed to workplace bullying acts and one control group - employees who haven't had been exposed to workplace bullying acts) and to analyze the differences between their health state and their psychological health state as a consequence of being or not exposed to bullying

in their professional settings. This is a reliable alternative which has been lately discovered by researches - to observe workplace bullying acts in their natural environment and to conduct quasi-experimental designs. But once again it is very hard to access environments more prone to workplace bullying behaviors, and it becomes even harder because few employers accept that such behaviors are practiced in their workplace settings. In this case, talking about a causal relationship between workplace bullying behaviors and its health consequences is a very delicate topic, and psychological interpretations should be carefully drawn.

In the research field of workplace bullying, there is one deontological and ethical way suitable for researchers to investigate the consequences of exposure to bullying behaviors on employees' health states. By using longitudinal designs, test-retest designs, cohort designs or cross-lagged designs thus, researchers can speak more accurately about a causal relationship among these two variables (*i.e.*, workplace bullying exposure and health consequences).

In the past ten years, in the workplace bullying field, more scientific articles studying the relationship between bullying behaviors and its consequences using longitudinal designs are being published, and so, based on their findings, we could speak even more about the reality of a causal relationship between these two psychological variables, showing the long-term effects of workplace bullying exposure on employees' psychological health.

Hoel and Cooper (2010) stated that workplace bullying became one of the major psychological stress factors which affect not only the employees' health states, but also the health of the entire organization. Their study shown that one of the organizational factor is that people quit their job if they are exposed to such types of behaviors and if they felt unvalued by the organization.

Given the fact that studies have evidenced that exposure to workplace bullying has diverse effects on their physical and psychological health states, Bond, Tuckey, and Dollard (2010) evidenced that post-traumatic stress disorder is one of the consequences experienced by exposed employees. Furthermore, Yu, Lee, and Tsai (2010) have shown that emotional burnout is another consequence of bullying behaviors. Kivimaki and their colleagues (2003) evidenced that depression is also among the consequences of workplace bullying behaviors and Tuckey and his colleagues (2010) have shown that

long-term effects of workplace bullying behaviors are associated with cardiovascular diseases. Moreover, Vartia's study (2001) indicated associations between workplace bullying exposure and stomach aches, headaches and muscular tension.

The consequences of prolonged workplace bullying behavior are felt also on the organizational level, and can be observed analyzing the number of sick leaves of employees, complaints from the part of employees and a low productivity (Hoel, Einarsen, & Cooper, 2003).

For society as a whole, the cost of workplace bullying behaviors is estimated at 6 billion dollars in Australia and 13.75 billion pounds in Great Britain (Giga, Hoel, & Lewis, 2008). In the United States of America, the number of affected employees by workplace bullying behaviors triggers a cost of approximately 65.6 million dollars (Namie, 2014) meaning an annual cost of 64 billion dollars per year (Query & Hanley, 2010).

Taking into account these high and diverse costs as a consequence of workplace bullying behaviors, the research efforts were made in the direction of understanding the causes of workplace bullying and the effects on employees' physical and psychological health states (Neill & Tuckey, 2014).

Despite the fact that there were made some progresses in understanding workplace bullying behaviors by taking into account the triggers of such behaviors, the workplace bullying phenomenon is difficult to prevent (Einarsen, Raknes, Matthiessen, & Hellesoy, 1996).

Until now, there are only a few studies which analyzed the role of coping strategies in workplace bullying exposure with one exception, the one of Zapf and Gross' (2001) study who used a mixed methodology to investigate the way people exposed to workplace bullying are facing these types of behaviors. These researchers have used not only qualitative methods, but also quantitative ones to investigate the relationships between coping strategies and workplace bullying behaviors. Despite the fact that Zapf and Gross' (2001) results are bringing important contribution to understand the coping strategies efficiency, they've only managed to highlight that passive strategies are the most effective strategies in case of workplace bullying exposure. Little is known about the environmental factors that triggers and maintains workplace bullying behaviors. Moreover, little is known about how organizational environment influences the choice of coping strategies to face workplace bullying acts.

From this perspective, there is an acute need to identify the role of organizational factors that may influence the efficiency of coping strategy chosen by employees to face workplace bullying acts. Wellbourne, Eggerth, Hartley, Andrew, and Sanchez (2007) agree on the fact that organizations have an important role in facilitating and sustaining the efficiency of coping strategies in case of workplace bullying behaviors.

Bullying in professional settings - longitudinal studies

Einarsen and Skogstad (1996), and Olweus (1993) have defined workplace bullying as being a form of interpersonal aggression displayed on a longer period of time in a systematic manner. This phenomenon was described as being that situation in which the employee perceives himself as being exposed in a persistent manner and over a longer period of time (*i.e.*, for at least six months) to a series of negative actions from the part of their superiors or their colleagues, and he can't defend himself anymore.

Einarsen, Hoel, Zapf, and Cooper (2011) stated that there isn't a clear list of bullying behaviors, but implies verbal hostility, being the joke subject of the department, being restrictive in accessing several organizational resources and being socially excluded.

According to the definition above, workplace bullying implies two phases. The first one refers to being repeatedly exposed to workplace bullying acts over a longer period of time, and the second phase implies exposed employees' subjective interpretation of being exposed to these acts.

According to Nielsen, Notelaers, and Einarsen (2011), a person became the target of workplace bullying acts without feeling as a victim, while an employee becomes the victim of workplace bullying when he ends up in the position of not being able to defend himself anymore. It was estimated that approximately 15% of the employees are exposed to workplace bullying acts while only a percent of 11% perceived themselves as being the victims of this phenomenon (Nielsen, Matthiesen, & Einarsen, 2010).

In their prospective study, Nielsen, Hoel, Zapf, and Cooper (2011) have been gathering data from a sample of 3066 employees at two years distance in time. The results of their study showed that the level of neuroticism predicted the subsequent behaviors of workplace bullying acts.

When the researchers took into account variables such as role ambiguity and role conflict, conscientiousness remained the single significant predictor of

workplace bullying measured in the first moment of data gathering. When they have analyzed the reversed associations, victimization as a consequence of initial aggression was significantly correlated with agreeability, conscientiousness and openness measured after two years. Their prospective study showed that personality traits function not only as predictors but also as effects of workplace bullying exposure.

Another longitudinal study conducted by Trepanier, Fernet, and Austin (2006) has used the cross-lagged panel design and discovered new information about the existing relationship between workplace aggression, basic psychological needs (autonomy, competence and belonging), and general functioning of the employee.

These researchers have structured their steps based on the new development of self-determination theory, analyzing the simultaneous temporal existing relationships between workplace bullying, the need for satisfaction, level of frustration and two indicators of psychological functioning as life satisfaction and somatic complaints.

Data were gathered in two different moments at 12 months distance in time on a sample of 508 medical nurses from Canada. Results have indicated not only the fact that psychological aggression negatively affects satisfaction related the need for autonomy and the need for competency, but also that these needs were frustrated by aggression. Frustration of the needs for competency and belonging and the satisfaction related to social relationships predicted psychological functioning of employees on a longer period of time.

These results suggest that frustration evaluation offers a deeply understanding of the devastating effects of prolonged exposure to workplace bullying acts. The effects are felt at the level of exhaustion of psychological resources so that the person arrives to not function well at her workplace.

Another longitudinal study developed by Nielsen and his colleagues (2011) have examined the longitudinal relationships existing between workplace bullying exposure and symptoms of psychological stress. The data was gathered from a sample of 1775 employees at two years distance in time. After controlling the effect of psychological distress measured initially, the results have shown that the psychological distress was statistically significant after two years.

Moreover, not only the psychological distress measured initially, but also the victimization was associated with higher risks of becoming a target of

workplace bullying acts after two years. In this respect, the association between psychological aggression and victimization at time one is smaller than the one between psychological aggression measured at time two and victimization measured at time two.

Mutual relationships exist also between psychological aggression and distress. Rodriguez, Moreno, and Sanz Vergel's (2014) longitudinal study shows significant relationships between psychological aggression, psychological health and employees' levels of well-being. This study had as a grounded theory, the one of resources conservation, and was conducted on 348 Spanish employees who filled the questionnaires in two different moments. The results showed that the psychological aggression measured at time one is negatively associated with psychological vigor measured at time two and, furthermore, psychological aggression measured at time one is positively associated with anxiety measured at time two. Moreover, psychological vigor and anxiety measured at time one have a significant impact on psychological aggression measured at time two.

Rodriguez, Moreno, and Sanz Vergel (2014) have evidenced that there is a two-way relationship between psychological aggression and the effects experienced by the employees. The fact of being the target of psychological aggression led to subsequent consequences such as anxiety, depression and other psychological health issues, and those later symptoms led to more psychological aggression.

The longitudinal study developed by Emdad, Alipour, Hagberg, and Jensen (2013) got the attention by the impact of environmental factors and the risk of experiencing depressive symptoms among the bystanders of this phenomenon, depending on their gender distribution. The study took place in four big industrial organizations from Sweden. The results have shown that the number of men who witnessed workplace bullying phenomenon was higher than the number of women who witnessed this phenomenon. However, the percent of men who developed depressive symptoms in the next 18 months was smaller comparing to the percent of women who witnessed workplace bullying behaviors and developed later depressive symptoms. The fact of being a workplace bullying witness, of hearing rumors about future organizational changes, of having a low level of clarity of your own job tasks and a low level of appreciation at work was associated with a higher risk of developing later depressive symptoms.

Thus, the results of this study have emphasized the impact of witnessing workplace bullying behaviors on later health symptoms of employees. These results have important empirical consequences as they show that not only the fact of experiencing workplace bullying behaviors leads to a worsening of employees' health state, but also the fact of being a witness to this phenomenon can determine a future worsening of employees' health. So it's shown the importance of prevention and intervention programs who can prepare employees on how to react efficiently in case they are witnessing these types of behaviors or if they are experiencing themselves workplace bullying behaviors. If they know how to efficiently react in these cases they can improve their inner emotional health states and they can remain efficiently engaged in their daily work tasks.

The cross-lagged panel design

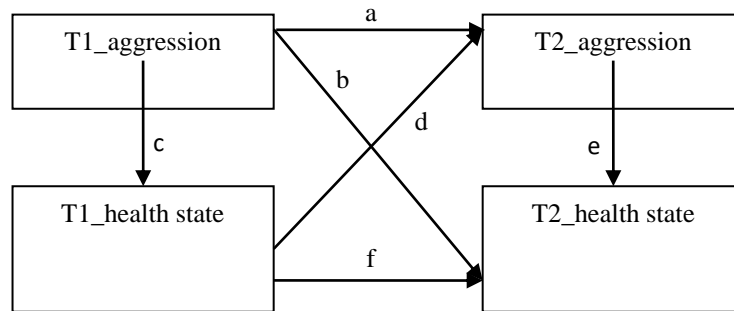
Based on the impact of workplace bullying acts on the individual, the present study aims to cover the gaps of previous cross-sectional studies, making the first steps toward a longitudinal design study approaching workplace bullying phenomenon. So it uses two different moments of data gathering on the same sample of employees and cross-lagged correlations to show the impact of long-term workplace bullying behaviors on later employees' health symptoms.

This design was previously used in mass media to evidence the impact of publicity on changing behaviors of clients as a consequence of repetitively being exposed to such types of stimuli. The main idea is that the fact of being persistently exposed to publicity may determine an attitude change toward a type of product and may determine the client to buy that product even though he doesn't really need it.

Later on, the same design was applied by psychologists in their research approaches in order to study the impact of cartoons on later aggressive behaviors displayed by children (aged 5 or 6 years old) who have watched these types of cartoons. The results have shown that the children who have watched these cartoons engaged in aggressive behaviors when they were 10 years old. Thus, the fact that cross-lagged studies implies testing the same sample at two different times can determine more accurate results compared to those obtained by the cross-sectional studies because it not only shows the short-term impact of a certain type of stimuli but also the long-term effects.

Furthermore, it can determine more precisely which variables are better seen as predictors and which are better seen as criteria variables. The design supposes to calculate all possible cross-lagged correlations between the variables measured at two different moments.

The design can be seen as the one in the following drawing:



The cross-lagged correlations are those that allow a causal relationship between workplace bullying measured at time one and later consequences in terms of employees' health states.

Starting from the cross-sectional studies (Leymann, 1996; Rayner, 1997; Vartia, 2001; Mikkelsen & Einarsen, 2002) focused on the potential causal relationship existing between workplace aggression and employees' health state such as sleep disorders, lethargy, headaches, skin problems, generalized headaches and digestive disorders (O'Moore et al., 1998b; Quine, 1999; Vaez et al., 2004; Lewis, 2006) and psychological symptoms such as anxiety, irritability, anger, depression, poor concentration skills, low levels of self-confidence, mental fatigue and lack of personal energy (Leymann, 1990; Bjorkvist et al., 1994; Agervold & Mikkelsen, 2004), the present study aims to study these relationships from a new perspective - the one provided by longitudinal studies and addressing the following question: Is workplace bullying phenomenon an effect or a cause of employees' health state? Are we sure that workplace bullying behaviors are the cause of employee's health state or in fact a low level of employee's health state determines others to bully him? Furthermore, beside the correlations mentioned above we also question the efficiency of coping strategies patterns regarding employees' health state.

Moreno-Jimenez and his colleagues (2009) have shown that the most efficient coping strategy is the positive reinterpretation of the phenomenon which reduced the employees' mental and physical strain using a cross-sectional design. Other previous studies have shown that, in general, the most efficient coping strategies are the passive ones such as avoidance and psychological detachment.

The study focused on coping strategies efficiency in case of workplace bullying exposure reached a consensus clarifying which are the most efficient strategies depending on their efficiency regarding employees' health status. Firstly, we can speak about passive coping strategies such as psychological detachment, avoidance and positive reinterpretation and, secondly, about active coping strategies such as approaching directly the issue of workplace bullying behavior.

Scientifically speaking the relationship between workplace bullying and coping strategies had remained unclear because studies have obtained contradictory results. Some of them have shown that the most efficient coping strategy is the passive one (Rayner, 1997; Olafsson & Dofradottir, 2004; Zapf & Gross, 2001; Moreno Jimenez et al., 2009), the active one being inefficient because it can worsen the situation (Zapf & Einarsen, 2005). Other studies as the one of Baillien and colleagues (2009) suggested the something not quite the same, meaning that the passive coping strategy named psychological detachment may be efficient at the level of employees' health, but inefficient at the group level. Those persons experiencing workplace bullying phenomenon or witnessing it and overpassing it by using psychological detachment as coping strategy have recorded, initially, lower levels of mental and physical strain, but their detachment behavior triggered frustration among the other employees who started to display bullying behaviors in order to motivate them to work harder.

Objectives

The first objective is to explore the relationship existing between workplace bullying and strain (*i.e.*, mental and physical) from a perspective that may restrain the limits of previous research studies (Quine, 2001; Salin, 2003; Fox & Stallworth, 2005; 2010; Garish & Wilson, 2010).

The second objective is to verify those existing findings in the psychological literature sustaining that solving directly the workplace bullying

phenomenon may worsen the situation (Zapf & Einarsen, 2005; Baillien et al., 2009).

Participants and procedure

A number of 73 employees have participated in this present study filling the questionnaires measuring workplace bullying, passive and active coping strategies and mental and physical strain at approximately 8 months distance in time (*i.e.*, time 1 was June- September 2012 and time 2 of measurement was March-May 2013). The participants received the questionnaires via e-mail. At time one, 190 valid questionnaires were sent back, and at time two only 73 questionnaires. The percent of positive responses was of 38.42%.

Questionnaires applied

Negative Acts Questionnaire (NAQ-R; Einarsen, Hoel, & Noetalers, 2009) - a five-point Likert scale, one meaning *never* and five meaning *daily*, to evidence the frequency with which a person may be experienced workplace bullying behaviors. This questionnaire has 22 items grouped into three dimensions. The first dimension is related to intimidation acts had 8 items (*i.e.*, items 2, 4, 6, 9, 11, 13, 22 as an example of item - "*You are humiliated with the importance of your work*") and the Alpha Cronbach coefficient was .844. The second dimension refers to workplace bullying acts targeting the workplace settings (*i.e.*, the items 1, 3, 14, 16, 18, 19, 21, an example of item - "*Someone doesn't share you important information fact that negatively affects your work performance*") and the Alpha Cronbach was .784. The third dimension includes direct workplace bullying acts against a person (*i.e.*, items 5, 8, 10, 12, 17, 20 and as an example of item - "*There were spread gossips and rumors about you*") and the Alpha Cronbach was .826. The Alpha Cronbach for the entire questionnaire is .922.

Occupational Stress Inventory - the scales of mental and physical strain (Evers, Frese, & Cooper, 2000). To measure mental and physical strain we used the scales of mental and physical strain from the Occupational Stress Inventory developed by Evers, Freese, and Cooper in 2000. To report the frequency of these symptoms the researchers have used a period of time of three months. The respondents should answer to each item thinking about the latest three months and if they have experienced symptoms of mental and physical strain.

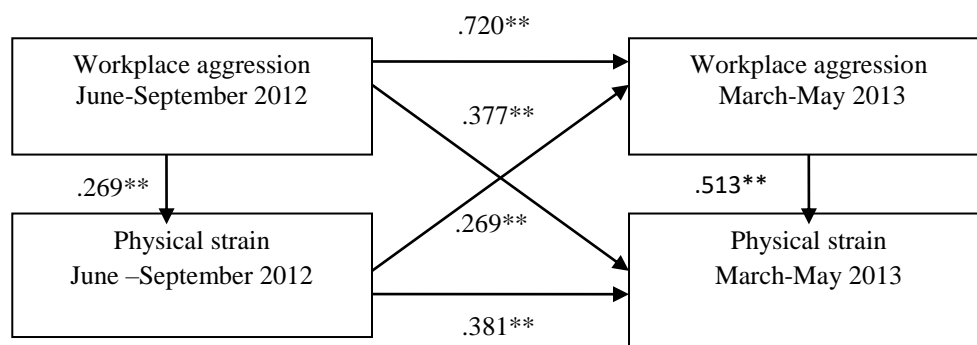
The answer was given on a Likert scale in six points, one meaning *never* and 6 meaning *always*.

The scale of physical strain has 12 items and the Alpha Cronbach for the entire scale is .828. One example of item can be: "*Usually I experience tremors of the muscles*". The scale of mental strain has 17 items and the Alpha Cronbach for the entire scale is .835. One example of item can be: "*In general, you would describe yourself as a person who worries too much*".

Results and discussions

First objective: Workplace bullying is a cause or an effect of the employees' health? For physical strain:

Presenting the cross-lagged panel design:



Note: * $p < .05$; ** $p < .01$

In order to answer if workplace bullying is a cause or an effect of employees' health state we will analyze the figure provided above and we will look for the cross-lagged correlations.

The cross-lagged panel design assumes that the bigger cross-lagged correlation highlights which variable can be considered the predictor and which one the criteria. In other words, which variable triggers another one.

In this case, we can observe that both cross-lagged correlations are positive, medium sized and significant, but the bigger correlation ($r = .377$, $p < .01$) is the one between workplace aggression measured at time one (June-September 2012) and physical strain measured at time two (March-May 2013).

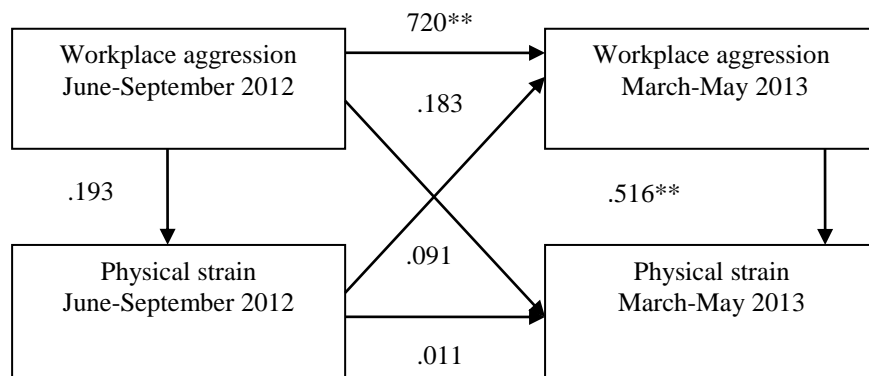
This fact means that workplace aggression is the cause for a high level of physical strain.

Because the correlation between physical strain measured at time one (June-September 2012) and workplace aggression measured at time two (March - May 2013) is smaller ($r=.269^{**}$ which is smaller than $r=.377^{**}$) than the one above, we cannot say that workplace aggression appeared as a consequence of employees high levels of mental strain but rather a cause for employees' higher levels of physical strain.

The first main objective was achieved and highlights the results already existing in the scientific literature showing that workplace aggression determine higher levels of employees' strain rather that the other way around (O'Moore et al., 1998b; Quine, 1999; Vaez et al., 2004; Lewis, 2006).

For mental strain:

Presenting the cross-lagged panel design:



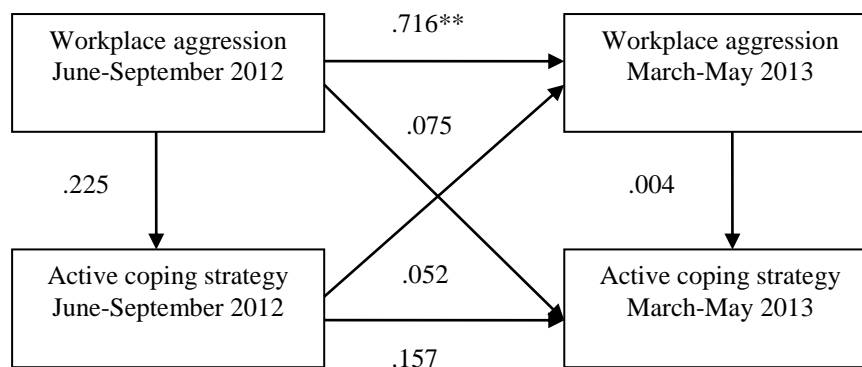
Note: * $p < .05$; ** $p < .01$

In the case of workplace aggression and mental strain, the bigger cross-lagged correlation ($r=.183$, $p > .01$) is among workplace aggression measured at time one (*i.e.*, June-September 2012) and mental strain measured at time two (*i.e.*, March - May 2013), allowing us to state that workplace aggression is the cause of employees' higher levels of mental strain and not the other way around. We cannot generalize this conclusion and say that employees who have a high level of mental strain were psychological aggressed at work.

Even though this correlation isn't significant from a statistical point of view, the results tend to be the same as ones from other studies in the literature, suggesting that workplace aggression is the cause of employees' higher levels of mental strain, in particular, and strain, in general (Leymann, 1990; Bjorkvist et al., 1994; Einarsen & Raknes, 1997; Agervold & Mikkelsen, 2004).

Second objective: Coping strategies implemented in workplace contexts can worsen the situation?

Testing the hypothesis: Active coping used in case of workplace bullying exposure can worsen the phenomenon.



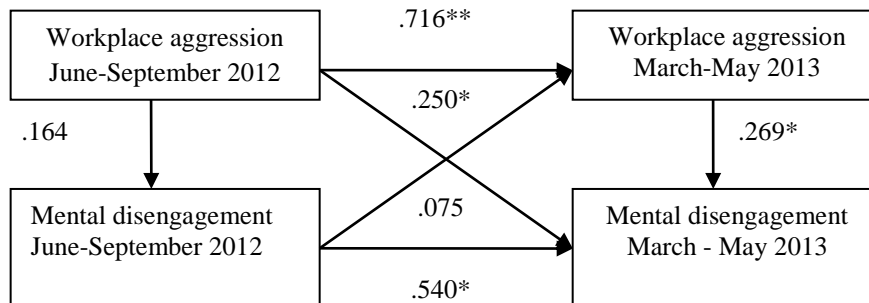
Note: **p<.01

According to the literature, active coping strategies used in case of workplace aggression may worsen the situation (*i.e.*, may increase the frequency of workplace aggression).

The results of our study didn't demonstrate this hypothesis. Not only that the cross-lagged correlations are statistically insignificant but also the correlation between time one active coping strategy and time two workplace aggression is smaller than time one aggression and time two active coping strategy. Thus, the hypothesis suggesting that directly approach may worsen the situation isn't sustained by the present study's data.

The empirical results couldn't sustain the fact that a direct approach strategy in case of workplace bullying may worsen the situation so Zapf and Einersen's (2005) conclusions couldn't be strengthened by this study as well.

Testing the hypothesis according to which: Mental disengagement can worsen the situation of workplace bullying exposure.



Note: ** $p < .01$; * $p < .05$

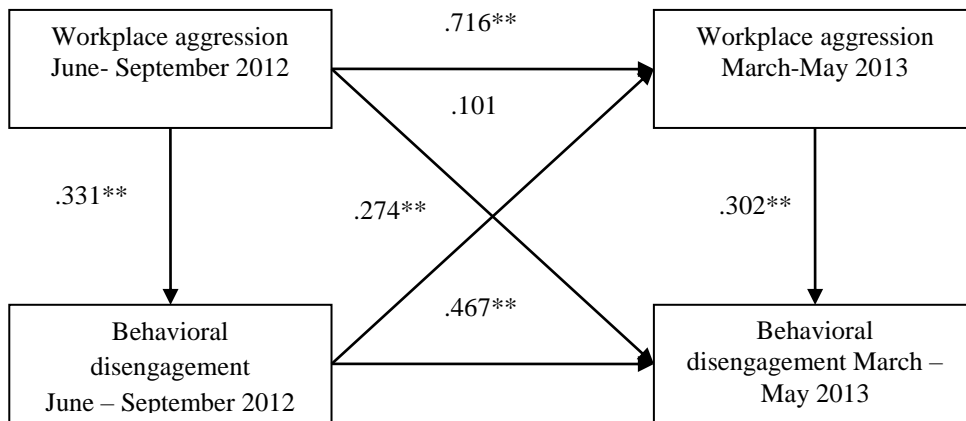
The cross-lagged correlations, in this case, showed that mental disengagement can be a predictor of later workplace bullying behaviors. The correlation between mental disengagement measured at time one (*i.e.*, June - September 2012) and workplace aggression at time two (March - May 2013) is statistically significant and bigger ($r = .250$, $p < .05$) than the one between workplace bullying at time one and mental disengagement at time two ($r = .075$, $p > .05$).

According to these results, the hypothesis was confirmed. The fact of becoming mental disengaged at work may trigger subsequent workplace bullying behaviors. These results just confirmed previous studies' results (Baillien et al., 2009) sustaining that an employee's psychological disengagement at work is a negative coping mechanism used in case of workplace bullying.

Testing the hypothesis according to which: Behavioral disengagement can worsen the situation of workplace bullying exposure.

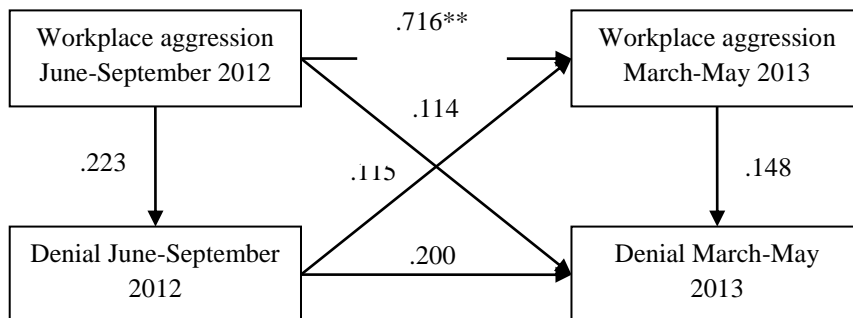
As for the cross-lagged correlations between workplace bullying and behavioral disengagement it can be observed that the biggest and most significant correlation ($r = .274$, $p < .01$) is the one between behavioral disengagement measured at time one (June - September 2012) and workplace aggression at time two (*i.e.*, March - May 2013). This means that behavioral disengagement at work may trigger subsequent bullying behaviors. Thus, using

behavioral disengagement as a coping mechanism in case of workplace bullying situation may worsen the situation. This type of coping strategy is an inefficient coping strategy.



Note: **p<.01

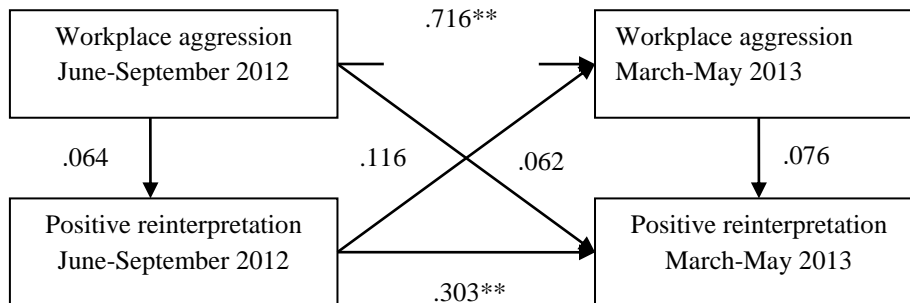
Testing the hypothesis: Denial of workplace bullying exposure may worsen the situation.



Note: **p<.01

If we are looking at the cross-lagged correlations we can observe that the one between denial and workplace bullying is positive, but not statistically significant. The fact of denying the workplace bullying behaviors doesn't worsen the situation.

Testing the hypothesis according which: Positive reinterpretation of workplace bullying behavior may worsen the situation.



Note: ** $p < .01$

In the case of positive reinterpretation strategy, the cross-lagged correlations are not statistically significant but the value of the correlation between workplace bullying measured at time one and the positive reinterpretation at time two is bigger than the value between positive reinterpretation at time one and the workplace bullying at time two. This fact contested the hypothesis according to which using positive reinterpretation as a coping strategy to face workplace bullying acts may worsen the situation. According to these empirical evidences using positive reinterpretation as a coping strategy to face workplace bullying acts may be an efficient coping strategy. These data don't confirm the hypothesis existing in the literature according to which some personality characteristics may trigger workplace bullying behaviors. So, bullying may appear no matter the person's personality characteristics. We can't state that a person's personality is responsible for the appearance of this phenomenon.

Conclusions

During the last ten years, studies focused on workplace bullying phenomenon have used cross-sectional studies to verify the relationships existing between workplace bullying and other personality and organizational variables, but, in most of the cases, they couldn't bring more clarity to the

causal direction between the variables above mentioned. We couldn't clarify either if workplace bullying behaviors are the main causes of different employees' health symptoms. So far, we couldn't answer the question who is the predictor and who is the criteria in case of workplace bullying phenomenon. Thus, interpreting the results in terms of causal effects was always a limit of cross-sectional designs. Many previous studies wanted to overcome this limit and this study managed to make the first step toward this objective.

The researchers reached the conclusion that if we want to interpret the results of an empirical study in terms of causal direction we should use longitudinal designs. It is not enough to gather data only one time and to calculate some statistical coefficients and, then, to analyze in terms of causal effects. We should observe the phenomenon and its dynamics for a longer period of time, and that's why a longitudinal design would be more efficient to observe workplace bullying dynamics.

Researchers from psychology field, in general, and those interested in workplace bullying phenomenon, in particular, have shown a higher interest to investigate the relationships existing between workplace aggression and health symptoms from a longitudinal point of view.

In the first phase, they used experimental designs to explore the relationships existing between workplace bullying phenomenon and employees' health symptoms, and were interested in isolating other external factors that may interfere with the direct relationship between workplace bullying and employees' symptoms. But experimental designs may trigger serious ethical implications because reproducing intentionally workplace bullying behaviors just to investigate its effects on employees' health symptoms is not ethically accepted.

Another accepted way to explore the causal relationships existing between workplace bullying and employees' health symptoms is the quasi-experimental designs. Observing the workplace bullying behaviors in their natural environment, and isolating other external factors that may interfere with the direct relationship may bring important information about the direct relationship existing between workplace bullying and employees' health symptoms. In this case, we also can face some difficulties. Firstly, few organizations recognize that they make use of such behaviors to discipline and to dominate their employees, and, secondly, even fewer organizations would

accept that a study would take place inside them to investigate the impact of workplace bullying phenomenon on employees' health symptoms.

Thus, according to the evidence gathered so far, the most appropriate manner to investigate the relationships existing between workplace bullying phenomenon and employees' health symptoms is the longitudinal design.

Studies focused on the workplace bullying phenomenon tend to investigate these relationships with other variables using more and more longitudinal designs. So far, the studies published in the scientific area have indicated a series of results demonstrating the vicious circle of workplace bullying.

Due to these types of designs, studies managed to demonstrate that pre-existing depressive symptoms may trigger more subsequent bullying behaviors seen as a defense mechanism used by the aggressor. Moreover, longitudinal studies managed to evidence that some personality characteristics such as anxiety or frustration may be responsible for subsequent bullying behaviors. Once again, researchers in the psychological field explained these results through the fact that when some people find themselves in the proximity of anxious people may use bullying behaviors against anxious people as a measure to determine them to stop being anxious. They explain that aggressors want to end the vibes produced by the anxious people.

Once again, longitudinal studies managed to demonstrate that some coping strategies were proved to be inefficient in case of workplace bullying phenomenon because they trigger more workplace bullying phenomenon. This is the case of the present study which demonstrated that active coping strategies are inefficient in case of workplace bullying phenomenon because they only trigger more bullying behaviors. These active coping strategies are seen as behaviors that disrespect the bully, and so because he feels offended he is using more bullying behaviors.

Furthermore, behavioral disengagement at work triggers more bullying behaviors from other colleagues or from the supervisor in order to determine the employee to be engaged and to finish their work tasks. In this case, workplace bullying behaviors are seen as motivating behaviors determining the worker to become more engaged in their daily work tasks.

This study managed to prove that mental disengagement is the most prevalent passive coping strategies when workplace bullying behavior last

more than one month. The more the bullying behaviors persist in time the more mental disengaged the employee will become.

The present study gathered data referring to workplace bullying, coping strategies, mental and physical strain in two different moments at eight months distance in time. According to our results, there is a causal relationship between workplace bullying acts and mental and physical strain.

Based on the limits of previous studies published in the literature, the present study overcomes these limits just by using a cross-lagged panel design to study the relationships existing between workplace bullying behaviors, coping strategies, mental and physical strain. This study represents a first steps toward a longitudinal design in order to overcome the limits of previous cross-sectional design studies.

So, experiencing prolonged workplace bullying acts activates higher levels of mental and physical strain. Our results didn't evidenced that active coping strategies used to face workplace bullying acts may worsen the situation even though there is a tendency in this direction. Previous studies (Zapf & Einarsen, 2005) have shown that active coping strategies such as discussing directly with the aggressor may worsen the situation, and therefore the aggressor will feel offended and use even more bullying behaviors as a way to express their anger.

Furthermore, active coping strategies are considered in the literature as inefficient coping strategies (Baillien et al., 2009), but our results have demonstrated only the correlation between mentally and behaviorally disengagement at work and more workplace bullying behaviors as a result.

On one hand, our study managed to sustain Zapf and Einarsen's (2005) statement that active coping strategy may worsen the situation. In other words, approaching directly the problem will only trigger even more bullying behavior because the aggressors feels offended and he will exert more bullying behaviors to express his anger and frustration. On the other hand, the present study managed to confirm Baillien and colleagues (2009) statement that mentally and behaviorally disengagement is an inefficient coping strategy in case of workplace bullying because it will trigger even more workplace bullying acts.

This study demonstrated that mentally and behaviorally disengagement is efficient on short-time (they reduce the mental and physical strain), but are inefficient on long-term because they trigger even more workplace bullying

acts coming from the aggressors who feel offended and exert more bullying acts as an expression of frustration and anger.

Furthermore, mentally and behaviorally disengagement will trigger more workplace bullying behaviors from co-workers and from supervisors who will exert more bullying behaviors in order to motivate the employee to re-engage in their daily workplace tasks.

Generally, longitudinal studies focused on the workplace bullying field managed to highlight the vicious circle of workplace bullying and the subsequent variables. In the first phases, the things appear to be very simple. Studies have made a number of lists of causes and effects, a list of moderator variables and mediating variables, but, in the last 27 years, they have shown that the more the knowledge advance the more complex the relationship become.

If initially cross-sectional studies have shown that experiencing workplace bullying behaviors triggers subsequent health problems, the longitudinal studies have shown that previous health symptoms trigger more bullying behaviors. The cross-lagged correlations have shown that pre-existing health problems have triggered more workplace bullying behaviors. For example, pre-existing levels of depression triggered mentally disengagement behaviors which triggered low levels of productivity and workplace bullying acts were considered as behaviors meant to re-motivate the employee.

So far, there are still a higher number of unknown factors when it comes to study the relationships existing between workplace bullying behaviors and health symptoms but what is known for sure is that workplace bullying does not have positive effects on employees' health state.

Study limits

This study has several limits. The first one is that it took into consideration only the positive aspects of active coping strategies such as approaching directly the bully and it didn't took into consideration the behaviors meant to aggress others.

The fact that the hypothesis referring to active coping strategies that may worsen the situation was not confirmed triggers a need for a more profound exploration of this relationship.

This study brings more information into the literature because it showed that prolonged workplace bullying behaviors have a negative impact on

employees' health states. According to these data, experiencing prolonged workplace bullying behaviors have a negative impact on employees' mental and physical strain. In time, the employee will become more worried, more concerned about his own safety and less preoccupied with his daily work tasks.

Our study may be considered the first step to a longitudinal approach by gathering data in two different moments which allowed us to highlight the appropriate direction between workplace bullying exposure, coping strategies and employees' levels of strain. The results have shown that experiencing prolonged workplace bullying behaviors have negative impact on employees' health states as depression, anxiety, fear and strain.

The study also showed that the most appropriate coping strategy it seems to be positive reinterpretation, and the most efficient on short-term (employees' levels of strain decreases) as well as on long-term (it does not trigger subsequent workplace bullying behaviors).

Future studies are invited to investigate the relationships existing between active coping strategies and future exposure to workplace bullying acts in order to detect more precisely the causal direction between these two variables.

References

- Agervold, M., & Mikkelsen, E. G. (2004). Relationships between bullying, psychosocial work environment and individual stress reactions. *Work and Stress, 18*(4), 336-351.
- Baillien, E., Neyens, I., De Witte, H., & De Cuyper, N. (2009). Towards a Three Way Model of Workplace Bullying: A Qualitative Study. *Journal of Community and Applied Social Psychology, 19*, 1-16.
- Bjorkqvist, K., Osterman, K., & Lagerspetz, K. M. J. (1994). Aggression among university employees. *Aggressive Behavior, 20*(3), 173-184.
- Bond, S. A., Tuckey, M. R., & Dollard, M. F. (2010). Psychosocial safety climate, workplace bullying, and symptoms of posttraumatic stress. *Organization Development Journal, 28*, 37-56.
- Einarsen, S., Raknes, B., Matthiesen, S., & Hellesoy, O. H. (1996). Bullying at work and its relationship with health complaints: moderating effects of social support and personality. *Nordisk Psykologi, 48*(2), 116-137.

- Einarsen, S., & Skogstad, A. (1996). Bullying at work: Epidemiological findings in public and private organizations. *European Journal of Work and Organizational Psychology*, 5(2), 185-201.
- Einarsen, S., & Raknes, B. (1997). Harassment in the workplace and the victimization of men. *Violence and Victims*, 12(3), 247-263.
- Einarsen, S., Hoel, H., & Notelaers, G. (2009). Measuring exposure to bullying and harassment at work: Validity, factor structure and psychometric properties of the Negative Acts Questionnaire Revised. *Journal of Work and Stress*, 23(1), 24-44.
- Einarsen, S., Hoel, H., Zapf, D., & Cooper, C. L. (2011). The concept of bullying and harassment at work: The European tradition. In S. Einarsen, H. Hoel, D. Zapf, & C. L. Cooper (Eds.), *Bullying and harassment in the workplace. Developments in theory, research, and practice* (2nd ed., pp. 3-40). Boca Raton, FL: CRC Press.
- Emdad, R., Alipour, A., Hagberg, J., & Jensen, I. B. (2013). The impact of bystanding to workplace bullying on symptoms of depression among women and men in industry in Sweden: an empirical and theoretical longitudinal study. *International Archives of Occupational and Environmental Health*, 86(6), 709-716.
- Evers, A., Frese, M., & Cooper, C. L. (2000). Revisions and further developments of the Occupational Stress Indicator: LISREL results from four Dutch studies. *Journal of Occupational and Organizational Psychology*, 73(2), 221-240.
- Fox, S., & Stallworth, L. E. (2005). Racial/Ethnic bullying: Exploring links between bullying and racism in the US workplace. *Journal of Vocational Behaviour*, 66(3), 438-456.
- Garisch, A. J., & Wilson, M. S. (2010). Vulnerabilities to Deliberate Self-harm Among Adolescents: The Role of Alexithymia and Victimization. *British Journal of Clinical Psychology*, 49, 151-162.
- Giga, S. I., Hoel, H., & Lewis, D. (2008). *The cost of workplace bullying*. Manchester: University of Manchester Institute of Science and Technology.
- Hoel, H., & Cooper, C. L. (2001). Origins of bullying: Theoretical frameworks for explaining workplace bullying. In N. Tehrani (Ed.), *Building a Culture of Respect: Managing Bullying at work* (1st ed., pp. 319), London: Taylor and Francis.

- Kivimaki, M., Elovainio, M., Vartia, M., Vahtera, J., & Keltikangas Jarvinen, L. (2003). Workplace bullying and the risk of cardiovascular disease and depression. *Occupational and Environmental Medicine*, 60(10), 775-779.
- Lewis, S. E. (2006). Recognition of workplace bullying: A qualitative study of women targets in the public sector. *Journal of Community and Applied Social Psychology*, 16(2), 119-135.
- Leymann, H. (1990). Mobbing and psychological terror at workplaces. *Violence and Victims*, 5(2), 119-126.
- Leymann, H. (1996). The content and development of mobbing at work. *European Journal of Work and Organizational Psychology*, 5(2), 165-184.
- Mikkelsen, E. G., & Einarsen, S. (2002). Relationships between exposure to bullying at work and psychological and psychosomatic health complaints: The role of state negative affectivity and generalized self-efficacy. *Scandinavian Journal of Psychology*, 43(5), 397-405.
- Moreno Jimenez, B., Rodriguez Munoz, A., Pastor, J. C., Sanz Vergel, A. S., & Garrosa, E. (2009). The moderating effects of psychological detachment and thoughts of revenge in workplace bullying. *Personality and Individual Differences*, 46, 359-364.
- Namie, G. (2014). *2014 WBI U.S. workplace bullying survey*. Bellingham, WA: Workplace Bullying Institute.
- Neall, A. M., & Tuckey, M. R. (2014). A methodological review of research on the antecedents and consequences of workplace harassment. *Journal of Occupational and Organizational Psychology*, 87, 225-257.
- Nielsen, M. B., Matthiesen, S. B., & Einarsen, S. (2010). The impact of methodological moderators on prevalence rates of workplace bullying. A metaanalysis. *Journal of Occupational and Organizational Psychology*, 83, 955-979. doi:10.1348/096317909X481256
- Nielsen, M. B., Notelaers, G., Einarsen, S. (2011). Measuring exposure to workplace bullying. In S. Einarsen, H. Hoel, D. Zapf, & C. L. Cooper (Eds.), *Bullying and emotional abuse in the workplace. Developments in theory, research and practice* (pp. 149-174). Boca Raton, FL: CRC Press.
- Olafsson, R. F., & Johannsdottir, H. L. (2004). Coping with bullying in the workplace: The effect of gender, age and type of bullying. *British Journal of Guidance and Counselling*, 32(3), 319-333.
- Olweus, D. (1993). *Bullying at school: What we know and what we can do*. Oxford: Blackwell Publishers.

- O'Moore, M., Seigne, E., McGuire, L., & Smith, M. (1998). Victims of Workplace Bullying in Ireland. *The Irish Journal of Psychology, 19*(2-3), 345-357.
- Query, T., & Hanley, M. G. (2010). Recognizing and managing risks associated with workplace bullying. *CPCU E-journal, 63*. Retrieved from http://business.nmsu.edu/~tquery/research/CPCU_eJournal_Bullying_Paper.pdf
- Quine, L. (1999). Workplace bullying in NHS community trust: Staff questionnaire survey. *British Medical Journal, 318*, 228-232.
- Quine, L. (2001). Workplace bullying in nurses. *Journal of Health Psychology, 6*(1), 73-84. Sage Publication.
- Rayner, C. (1997). The Incidence of Workplace Bullying. *Journal of Community and Applied Social Psychology, 7*, 199-208.
- Rodriguez, A., Moreno, B., & Sanz Vergel, A. (2014). Reciprocal relations between workplace bullying, anxiety and vigor. *Journal of Work and Stress, 720-736*.
- Salin, D. (2003). Bullying and Organizational Politics in Competitive and Rapidly Changing Work Environments. *International Journal of Management and Decision Making, 4*(1), 35-46.
- Trepanier, S. G., Fernet, C., & Austin, S. (2016). Longitudinal relationships between workplace bullying, basic psychological needs and employee functioning: a simultaneous investigation of psychological need satisfaction and frustration. *European Journal of Work and Organizational Psychology, 690-706*.
- Tuckey, M. R., Dollard, M. F., Saebel, J., & Berry, N. (2010). Negative workplace behaviour: Temporal associations with cardiovascular outcomes and psychological health problems in Australian police. *Stress and Health, 26*, 372-381.
- Vaez, M., Ekberg, K., & Laflamme, L. (2004). Abusive events at work among young working adults: Magnitude of the problem and its effect on self-rated health. *Relations Industrielles, 59*(3), 569-583.
- Vartia, M. (2001). Consequences of workplace bullying with respect to wellbeing of its targets and the observers of bullying. *Scandinavian Journal of Work, Environment and Health, 27*(1), 63-69.
- Welbourne, J. L., Eggerth, D., Hartley, T. A., Andrew, M. E., & Sanchez, F. (2007). Coping strategies in the workplace: Relationships with attributional

- style and job satisfaction. *Journal of Vocational Behavior*, 70, 312-325. doi:10.1016/j.jvb.2006.10.006
- Yu, M. C., Lee, Y. D., & Tsai, B. C. (2010). Relationships among stressors, work family conflict, and emotional exhaustion: A study of electronics industry employees in China. *Social Behavior and Personality: An International Journal*, 38, 829-844. doi:10.2224/sbp.2010.38.6.829
- Zapf, D., & Gross, C. (2001). Conflict escalation and coping with bullying: A replication and extension. *European Journal of Work and Organizational Psychology*, 10(4), 487-522.
- Zapf, D., & Einarsen, S. (2005). Mobbing at work: Escalated conflicts in organizations. In S. Fox & P. E. Spector (Eds.), *Counterproductive work behavior: investigations of actors and targets*. Washington: American Psychological Association.