IUL School of Social Sciences
Department of Social and Organizational Psychology

Good Apples and Bad Apples: Different Approaches on Presenteeism – A Daily Diary Study

Dissertation submitted as partial requirement for the conferral of
Master in Social and Organizational Psychology

by

Dora Cristina Santos Oliveira

Supervisor:
Ph.D. Aristides Isidoro Ferreira, Assistant Professor
ISCTE – University Institute of Lisbon

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Resumo

Este estudo teve como objectivo a construção e validação de uma escala que pretende medir os ganhos e as perdas associadas ao presentismo ("*good apples and bad apples)"*, sendo que este novo construto da área organizacional consiste no facto de as pessoas irem trabalhar doentes. Participaram nesta parte do estudo trabalhadores portugueses dos sectores da saúde, social, banca e serviços (n=105). Através da realização de análises de componentes principais com rotação varimax, análises factoriais confirmatórias, estudos de concomitância e teoria de resposta ao item, foram demonstradas as qualidades métricas da escala. Adicionalmente, procurou-se estudar o fenómeno no seu contexto, assim como as flutuações individuais. Assim, utilizando uma metodologia longitudinal – *daily diary study* – testaram-se algumas hipóteses. Nesta parte do estudo, participaram 42 trabalhadores de uma instituição social. Recolheram-se dados diários durante duas semanas consecutivas de trabalho, os quais foram analisados através do modelo hierárquico linear. Verificou-se que o afeto negativo e o *burnout* se associam positivamente à perda de produtividade devido a presentismo, enquanto que o vigor se associa negativamente. Da mesma forma, verificou-se que o afeto negativo e o *burnout* se relacionam positivamente com as perdas do presentismo, enquanto que o vigor se relaciona negativamente. Por último, constatou-se que o conflito família-trabalho se associa positivamente aos ganhos do presentismo.

Palavras-chave: perdas de produtividade, ganhos e perdas do presentismo, comportamento de cidadania organizacional, *engagement*

Abstract

This study aimed to develop and validate a scale that intends to measure presenteeism gains and losses ("good and bad apples"). This new concept in the organizational filed consists on being on the job but sick. Portuguese workers from health, social, bank and services sectors collaborated (n=105) on this part of the study. By conducting principal component analysis with varimax rotation, confirmatory factor analysis, concomitance studies and item response theory, appropriate metrical qualities were demonstrated. Additionally, this study aimed to approach the phenomenon in its context as well as individual fluctuations. Thus, by using a longitudinal methodology – daily diary study – several hypotheses were tested. In this part, 42 workers from a social institution participated. Weekly diary data gathered over the course of two working weeks were analyzed according to the hierarchical linear modeling. Results showed that negative affect and burnout positively predicted productivity losses due to presenteeism while vigor negatively predicted it. The same way, negative affect and burnout were positively associated to presenteeism losses while vigor was negatively associated. Lastly, family-to-work conflict positively predicted presenteeism gains.

Key-words: productivity losses, presenteeism gains and losses, organizational citizenship behavior, engagement

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Introduction

In recent decades presenteeism has become one of main concerns in the organizational area. However, the investigation and theorization of this concept has mostly focused on its negative impact over the individuals and the organizations. Productivity losses, deterioration of physical and psychological health and its inherent costs are in the center of presenteeism's most common perspective.

However, with the emergence of Positive Psychology, more attention has been paid to the positive aspects of general behaviors since it emphasizes the study of human strength and optimal functioning. Thus, this perspective arises to supplement the traditional focus on psychopathology, disease, disturbance and malfunctioning (Seligman & Csikszentmihalyi, 2000).

Luthans (2002) has also preconized that the development of Positive Psychology has reinforced the need for a proactive and positive approach of the organizational behaviors that highlights the positive aspects instead of only reinforcing the problems. Therefore, the author has argued that this may also be applied to the phenomenon of presenteeism.

As mentioned before, a similar analysis is possible with presenteeism by taking into account its possible benefits such as the positive impact in terms of productivity as well as organizational development. As Johns (2010) admitted, presenteeism can be viewed as an act of "organizational citizenship behavior" that deserves recognition and Bierla, Huver and Richard (2012) stated that presenteeism is an expression of loyalty to the company.

Organizational citizenship behaviors have been described by Organ (1988) as discretionary behaviors, which are not part of the job description, and are performed by the employees as a result of a personal choice. People go beyond what is an enforceable required on the job and contribute positively to overall organizational effectiveness.

Additionally, Gosselin and Lauzier (2011) share the perspective that it is a mistake to limit the concept of presenteeism to its negative impact in productivity as it may have remarkable positive effects for the worker as well as the company.

Therefore, the present study is based on the assumption that the act of presenteeism relates to the decision that the person who is sick takes and has positive consequences – what we called "good apples" - for him as well as the organization. A vision that only takes in consideration the negative impact, as opposed to the gains that it can represent for the

organization and its workers, becomes limited and reductive. In this sense, we assume that presenteeism gains are significant and that the act of presenteeism may be considered an individual citizenship behavior as well.

To better understand presenteeism, it becomes relevant to integrate its positive and negative aspects as well as its relation with productivity. Acknowledging that presenteeism also brings competitive advantages (Hemp, 2004), the tendency for the companies may be to implement strategies to increase its levels in the hopes of reducing absenteeism ones, which correspond to a total loss of productivity (Middaugh, 2007). In this topic, Norway has become well-known for recognizing that presenteeism is an advantage over absenteeism and for developing policies that promote presenteeism in order to minimize the high absenteeism levels (Krohn & Brage, 2008).

The present study aims to contribute to the understanding of the positive and negative aspects of presenteeism and two principal objectives guided this investigation. Firstly, we have developed and validated an instrument for measuring presenteeism gains and losses. Secondly, by choosing a longitudinal methodology – daily diary study - we intended to better comprehend this phenomenon in the work context as well as the individual fluctuations (Iida, Schrout, Laurenceau & Bolger, 2012).

Several hypotheses have been tested to study the possible relationship between productivity losses due to presenteeism, presenteeism losses and presenteeism gains with the following variables: family-to-work conflict, negative affect, burnout and engagement (vigor, dedication and absorption). Finally, theoretical and practical implications for human resource management are discussed and directions for future research in the field are provided.

I. The concept of presenteeism

Presenteeism refers to the behavior of going to work while ill (Aronsson, Gustafsson & Dallner, 2000). It has important implications in theory and organizational practices but only recently has become object of analysis, mainly since the 90's. However, and unlike the concept of absenteeism, it has been much less studied and it is still difficult to measure. According to Hemp (2004), when presenteeism occurs, the person is at the office but his productivity is limited or he does not have all physical and psychological capabilities.

Middaugh (2007) has also emphasized that presenteeism is relatively new in the occupational health and productivity literature. According to this author, presenteeism is defined by the practice of coming to work when an individual should not, which results in being physically present but functionally absent. The worker is at work but not performing to the maximum potential due to physical or psychological problems.

Despite the increase of studies on the subject, according to Bierla et al., (2012) presenteeism remains hard to analyze. It refers to the propensity to attend work even when sick and despite having the possibility of claiming a sick leave. It is a recent phenomenon that hasn't been studied in the same proportion as absenteeism, probably because it is not easy to identify nor quantify.

Presenteeism is not only the opposite of absenteeism but the behavior of being present at work presenting a physical or psychological state that limits the capacities to produce (Gosselin et al., 2011). It is also important to consider that the inherent losses of productivity are independent from the workers' will. The symptoms associated with health problems (e.g. attention problems, motor difficulties, cognitive problems) will be responsible for a significant and undeniable reduction on job performance.

Moreover, it is important to acknowledge that presenteeism is a complex phenomenon which is determined by individual and organizational conditions. On one hand, "involuntary presenteeism" is characterized by the impossibility of the worker to be absent from work. Under these circumstances, the worker remains at work despite considering that his health condition needs absence. On the other hand, "voluntary presenteeism" relates directly to the personal decision of the person to keep working. A performance reduction may occur but the worker sees presenteeism as beneficial for himself and the organization (Gosselin et al, 2011).

The impact of absenteeism in productivity is direct but with presenteeism is different since workers with similar symptoms can vary a lot in terms of productivity losses. For that

matter, one should consider the subjective character of the health situation as well as the self-perception of its impact on the employee productivity (Johns, 2010).

Additionally, Krohne and Magnussen (2011) have also verified that the decision to attend work despite illness is mainly based on the severity of the health complaint. This evidence leads to think that some health symptoms may be considered tolerable and not interfere with the individual's performance while others may be unbearable. Additionally, perceptions of health problems may vary from person to person. Thus, while some health symptoms may be considered bearable by some, they may be unbearable to others.

In another study, Goetzel, Long, Ozminkowski, Hawkins, Wang and Lynch (2004) have identified the physical and mental illnesses that were prevalent and costly for employers. The top ten physical health conditions identified were: angina pectoris (chronic maintenance), hypertension, diabetes mellitus, mechanical low back pain, acute myocardial infarction, chronic obstructive pulmonary disease, back disorders not specified as low back, trauma to spine and spinal cord, sinusitis and diseases of the ear, nose and throat, not elsewhere classified.

Likewise, the top ten mental health conditions identified were bipolar disorder, (chronic maintenance), depression, depressive episode in bipolar disease, neurotic personality and nonpsychotic disorders, alcoholism, anxiety disorders, schizophrenia (acute phase), bipolar disorders (severe mania), nonspecific neurotic personality and non-psychotic disorders and psychoses.

According to Johns (2010), presenteeism is the reflex of organizational insecurity and it is important to understand its antecedents as well as which reasons lay behind the fact that the person continues to attend work despite having a physical or psychological health problem (e.g. headaches, chronic pain, allergies, respiratory problems, anxiety, depression, attention problems). Regarding the topic of job insecurity, we may add that the economic crisis which started in 2008 may have enhanced presenteeism levels as well.

For Johns (2010), presenteeism may be related to other factors such as positive feelings to work and moral obligations. The author has proposed the Dynamic Model for Presenteeism and Absenteeism - DMPA (2010), whose basis is that the behaviors of presenteeism and absenteeism have the same antecedents.

The model assumes that assiduity and productivity may be interrupted by an illness episode which can be acute, episodic or chronic, and it states that the appearance of

absenteeism and presenteeism is determined by the nature of the context. In other words, what causes one or the other behavior is the interaction between the person, the disease and the situation (job or occupation). Likewise, Dew, Keefer and Small (2005) have suggested that what determines one behavior or the other is the work context.

Regarding its organizational antecedents, Johns (2010) stated that presenteeism relates to organizational policies, work characteristics and presenteeism cultures. Despite this, the author considers that the research in this area is scarce and further study is required. In his belief, regarding organizational policies, presenteeism is positively correlated to lower wages, temporary contracts, attendance control, downsizing and work overload as well. Still, there have been contradictory results since these factors can also stimulate absenteeism due to the perception of injustice and stress.

In terms of work characteristics, presenteeism is associated with physical and psychological demands, adjustment latitude (the possibility of adapting the work to the state of health), ease of replacement and team work. Concerning the latter, giving the importance of achieving common goals, an obsession with work frequently emerges (Johns, 2010).

In addition, there is evidence that people who work in high demanding physical, cognitive and social contexts are inclined to be present at work in order to maintain the usual high levels of performance (Demerouti, Le Blanc, Bakker, Schaufeli & Hox, 2009).

Furthermore, presenteeism cultures are more common in health and educational sectors. In these occupations, a culture of loyalty and deep concern with the clients' vulnerability is present, since the majority of clients are ill, children or elderly people. Members of occupational groups whose everyday tasks are to provide care or welfare services or teach or instruct have a substantially increased risk of being at work when sick. These are occupations where relationships with other persons play an important part in work outcome and, as a result, these workers are more prone to engage in presenteeism (Aronsson et al., 2000).

Moreover, Simpson (1998) has identified the existence of competitive presenteeism cultures in which people work overtime. In this case, men are more inclined to engage in it in order to succeed professionally. Sheridan (2004) also pointed out that the pressures on men to be present in the workforce and the organizational norms rewarding longer hours contribute to the cult of presenteeism that many men in professional and managerial roles experience nowadays.

Also, Lowe (2004) equated the act of presenteeism as two different behaviors. One is described by going to work sick or tired while the other relates to put in excessive work hours as an expression of commitment to the organization or a way of coping with job insecurity.

Regarding its individual antecedents, Johns (2010) emphasizes that workers with positive work attitudes and perceptions of justice will exhibit more presenteeism, and the same happens among workaholics and the ones who have a consciousness personality. On the other hand, absenteeism seems to be higher in those who experience more stress, have an external health locus of control, are more prone to illness and perceive absenteeism as a legitimate behavior.

Furthermore, from Gosselin et al. (2011) perspective, the organizational factors that promote presenteeism are job insecurity, working hours, overload, supervisors' support, group's cohesion, organizational culture, leadership style, job type and field of activity. On the same topic, but regarding individual antecedents, the more prone to presenteeism are women, middle-aged workers and workers who have young children. Job satisfaction, stress, burnout and family dynamics are other individual causes of presenteeism.

Like Aronsson and Gustafsson (2005) theorized, for any given health status, the factors for explaining the decision of sickness attendance are work-related factors and personally related ones. Work related ones are due to difficulties in staff replacement, time pressure, conflicting demands and insufficient resources whereas personal factors are linked to financial demands and to the individual difficulty to say no and resist to other people's expectation as well.

Besides that, Demerouti et al. (2009) have synthesized that there are several reasons why employees go to work while sick. This includes perceived pressure from colleagues not to let them down and cause them more work, attendance policy, the fear that absenteeism will put promotion opportunities at risk and the fear of dismissal.

Apart from these motives there are also positive reasons why people continue to go to work, such as job satisfaction (Demerouti et al., 2009). Moreover, Roe (2003) has found that interesting and stimulating work and good relationships with colleagues and clients are other reasons for engaging the act of presenteeism.

Moreover, Gilbreath and Karimi (2012) have observed that negative supervisor behaviors relate more strongly to presenteeism than positive ones. Thus, presenteeism seems to be subject to supervisor influence.

The origin of presenteeism is always a health problem that mines the productivity capacity of the worker (Gosselin et al., 2011), although presenteeism is a multifaceted act and few studies have been made around its inherent reasons. However, work-related factors seem to be slightly more important than personal circumstances and attitudes in determining people's decision to be ill at work (Hansen & Andersen, 2008).

Furthermore, Baker-McClearn, Greasley, Dale and Griffith (2010) found that presenteeism is a complex problem. It is not a one-dimensional construct and is continuously being shaped by individual and organizational factors. In addition, evidence was found that performance and well-being are more closely related to the organizational reaction to presenteeism and absenteeism rather than the act itself, that is to say, to how the organization deals with each one of them.

For Stevens (2004), presenteeism is clearly the new frontier as companies continue to seek ways to reduce costs, improve productivity, and promote employee health and wellness. Therefore, one should recognize that the behavior of presenteeism is inevitable in the workforce and that it may be tolerable or toxic. In this way, the organization should not deal with this problem with inactivity. On the contrary, it is important to diagnose its nature and incidence, as well as develop organizational policies to reduce absenteeism and promote both physical and mental health at work (Gosselin et al., 2011). The first step might be to accurately measure the impact of this phenomenon in terms of how it affects productivity levels.

1.1 Productivity losses due to presenteeism

One thing is for sure, presenteeism has a strong impact in work productivity and the costs associated with performance greatly exceed the combined costs of absenteeism and medical treatment (Collins, Baase, Sharda, Ozminkowski, Nicholson, Billotti, Turpin, Olson, & Berger, 2005).

Additionally, a study conducted by Hemp (2004) showed that workers who engage in presenteeism are less productive in about 30%. From the author's perspective, presenteeism is not always apparent and its economic costs are greater than with absenteeism, corresponding to $150 billion annually in the United States alone.

Ferreira and Martinez (2012) have also expressed that presenteeism refers to productivity losses that occur when employees come to work but under-perform due to physical and psychological causes.

Thus, presenteeism is frequently associated with significant productivity losses resulting from a real health problem, which can reach to 1/3 in a situation of presenteeism. Illness affects both the quantity and the quality of work as well. People might work more slowly or have to repeat tasks, or might make serious mistakes, respectively. Despite this, the impact of presenteeism is still difficult to measure, and the same occurs with productivity losses due to it (Hemp, 2004).

Scholars have often measured presenteeism in terms of how often an individual attends work while unhealthy. For instance, Aronsson et al. (2000) asked participants to what extent over the past year they had gone to work despite feeling they should have taken a sick leave. However, aside from measuring the frequency of presenteeism, measuring the effects of poor health on job productivity becomes a priority.

1.2 Presenteeism measures

Despite the fact that presenteeism is a recent construct, there are various instruments of measurement, whose objective is to diagnose the phenomenon in the organizational context and estimate the impact of diseases in productivity. Several self-report productivity instruments have been designed over the past few years and we stand out the following four:

1.2.1 Work Productivity and Activity Impairment Questionnaire (WPAI)

The Work Productivity and Activity Impairment (WPAI) was developed by Reilly, Zbrozek and Dukes (1993) with the purpose of collecting productivity loss data. It is a self-report instrument that measures on-the-job impact of chronic conditions and there are several versions of the questionnaire, including WPAI-general health (WPAI-GH), WPAI-specific health problem (WPAI-SHP), WPAI-allergy specific (WPAI-AS), and the WPAI-gastro-esophageal reflux disease (WPAI-GERD) (Lofland, Pizzi & Frick, 2004).

The WPAI-GH consists of six questions that ask the number of hours missed from work and usual activities, as well as the degree to which work or regular daily activities were limited over the past seven days. The four scores of the questionnaire are expressed as impairment percentages, with higher numbers reflecting greater impairment and consequent decreased productivity. The four scores are: i) percentage of work time missed due to health; ii) percentage impairment while working due to health; iii) percentage activity impairment due to health; and iv) overall percentage work impairment score due to health problems.

Questions included in all WPAI tools are similar, with the exception that WPAI-SHP, WPAI-AS and WPAI-GERD make specific reference to a particular disease. Thus, WPAI has been used within studies of several medical conditions (Lofland et al., 2004). Because WPAI does not ask questions specific to the type of employment, the instrument is generalizable across occupations and diseases (Prasad, Wahlqvist, Shikiar & Shih, 2004).

1.2.2 Stanford Presenteeism Scale-6 (SPS-6)

The Stanford Presenteeism Scale (SPS-6) seeks to determine the effects of health on productivity. It measures participants' abilities to concentrate and perform work despite having a health problem (Koopman, Pelletier, Murray, Sharda, Berger, Turpin, Hackleman, Gobson, Holmes & Bendel, 2002). The scale measures the impact of general health status on individual performance and productivity and evaluates two distinct factors that the authors labeled as "completing work" and "avoiding distraction".

Like Martinez, Ferreira, Sousa and Cunha (2010) explained, the first measure focuses on the physical causes of presenteeism and corresponds to the amount of work done in a situation of presenteeism while the second refers to psychological aspects and corresponds to the amount of mobilized concentration to produce, under the effects of presenteeism.

Each of the factors are evaluated by three items, which totalizes six questions, in a scale of five possible answers (from strongly disagree to strongly agree). Through its items, respondents determine the extent to which they agree with the statements that describe how their health condition may or may not affect their work.

1.2.3 Work Productivity Short Inventory (WPSI)

The Work Productivity Short Inventory (WPSI) was developed by Ozminkowski, Goetzel and Long (2003) to quickly estimate decrements in productivity associated with 15 common disease conditions and the financial implications of those problems. Three versions of the WPSI were developed that differ according to the length of the recall period (12 months, 3 months or 2 weeks). The WPSI can be used to provide information on the relative importance of health conditions that affect productivity at work for a large group of employees.

1.2.4 Work Limitations Questionnaire-8 (WLQ)

The Work Limitations Questionnaire (WLQ) was originally constructed by Lerner, Amick, Rogers, Malspeis, Bungay and Cynn (2001) and was initially constituted by 25 items that evaluate four dimensions: limitations handling time, physical, mental-interpersonal and output demands.

The reduced version (WLQ-8) was later adopted by Ozminkowski, Goetzel, Chang and Long (2004) and is composed of eight self-reported items in a scale of five points (from strongly disagree to strongly agree). The recall period varies from 2 to 4 weeks, depending on the specific application of the instrument (Prasad et al., 2004).

As Martinez et al. (2010) stated, WLQ-8 presents itself as a good measure to evaluate the impact of chronic diseases in the work context. Moreover it provides evidence about the relationship between health and productivity (Lerner et al., 2001).

II. Bad apples, or presenteeism losses

Presenteeism is a new concept in the organizational field and it is important to clarify its historicity. Initially it was considered the opposite of absenteeism and a desirable organizational situation that restricted the direct and indirect costs of absenteeism. Today it is widely viewed as a professional over-investment given the fact that the person prioritizes work in face of the other spheres of life (Gosselin et al., 2011).

Hemp (2004) pointed out that presenteeism involves direct costs (medical and pharmaceutical ones) and hidden ones (productivity losses, shot-term disabilities, long-term disabilities and absenteeism). Moreover, in organizational terms, Martinez et al. (2010), have described that presenteeism entails direct costs to the organization which are easier to measure (such as medical appointments, hospitalizations and medication) and indirect costs, which are evaluated through the analysis of presenteeism and absenteeism and associated to productivity loss and workers life quality reduction.

According to Gosselin et al. (2011) the symptoms associated with the workers' health problems limit their ability to produce. In some situations, the worker does not allow himself to miss work, what causes the delay of his convalescence, and worsens his health state. Therefore, the act of presenteeism is now on the center of the modern organizational concerns.

The same authors refer that presenteeism also corresponds to a personal valorization mechanism and a strategy to deal with the professional insecurity. It also relates to an excessive commitment with work that, associated with a high number of hours working, may lead to a more fragile health state and the appearance of various symptoms. Presenteeism is also associated to concepts like over commitment and workaholism following the idea that it represents an excessive dedication to work that has a negative impact on both individuals and organizations.

Goetzel et al. (2004) investigation underlines the cost of presenteeism associated with the decreased "on-the-job productivity" and resulting in high financial losses. However, one should also recognize the subjectivity of people's evaluation of their own health status (Fleten, Johnsen & Forde, 2004) as well as the subjectivity of the self-perceptions regarding productivity losses (Johns, 2010).

Like Johns (2010) has mentioned, at an individual level, presenteeism may exacerbate the clinical symptoms and reduce life quality as well as promote the feeling of ineffectiveness due to the low productivity associated. It is also important to note that physical problems are easier to identify, while psychological problems, such as depression, anxiety, burnout and others, are strong causes of presenteeism but not considered legitimate reasons to miss work.

Another undesirable aspect of presenteeism is that it is possibly associated with the risk of contagion to colleagues and clients. In some cases, it may even constitute a public health problem (Widera, Chang & Chen, 2010).

Presenteeism and absenteeism can have subsequent effects on health state, assiduity and organizational filiation. Chronic presenteeism affects health, reduces productivity and increases absenteeism. Similar to what Johns (2010) has stated, it is expected that unsatisfied and insecure workers feel the pressure to attend work when sick and consequently lower their productivity, start missing work and eventually quit. Alternatively, sickness absence could be health-promoting since it would facilitate recuperation following strain or disease (Aronsson et al., 2005).

As presenteeism corresponds to attend work while sick it is conceivable to think that it will lead to the deterioration of health conditions and therefore turn into absenteeism (Bierla et al., 2012). Additionally, presenteeism has been shown to be negatively related to job satisfaction and positively related to job stress, depersonalization, exhaustion and burnout (Demerouti et al., 2009). Further studies have also revealed that other psychological problems, such as job burnout and stress, are associated with higher levels of presenteeism (Boles, Pelletier & Lynch, 2004).

Depersonalization is an attempt to put distance between oneself and the others. In other words, people develop an indifferent or cynical attitude when they are exhausted or discouraged. Exhaustion is the most obvious manifestation of burnout and leads to distance oneself emotionally and cognitively form one's work as a way to cope with work overload. Finally, burnout represents a chronic on-going reaction to one's work and a negative affective response to prolonged stress, which is not immediately reversible after changes in tasks or the working conditions and by adequate recuperation (Maslach, Schaufeli & Leiter, 2001).

The presenteeism cultures studied by Simpson (1998) are those which stimulate competition, productivity and organizational development, but they are also conducive to the appearance of a number of presenteeism causes which makes this behavior dysfunctional and harmful for both the individual and the company.

We note that, despite the conceptualization of the DMPA in 2010, it has later been verified that only overall health, ease of replacement and consciousness correlate negatively with productivity losses due to presenteeism while neuroticism and family-to-work conflict correlate positively (Johns, 2011).

In terms of consequents, Roe (2003) has suggested that presenteeism has two kinds of negative effects. First, individual performance may suffer since sick employees have to invest more time and effort to produce the same outputs as health employees. Second, collective performance may suffer because workers become involved in helping sick colleagues or because employees may pass on infectious illnesses to their colleagues and clients.

Furthermore, knowing that hope is one of the principal links between positive organizational behavior and presenteeism, Martinez, Ferreira, Sousa & Cunha (2007) verified that the presenteeism dimension of "avoiding distraction" (which refers to the amount of mobilized concentration under the effects of presenteeism causes) is associated with low hope levels.

According to Demerouti et al. (2009), presenteeism is a risk-taking organizational behavior that should be prevented. Through their study results, they have come to the evidence that high job demands cause more presenteeism while depersonalization is an outcome. Exhaustion and presenteeism were found to be reciprocal, suggesting that when employees experience exhaustion they mobilize compensation strategies (Sonnentag, 2005).

This author has found that presenteeism is ultimately a counter-productive behavior since it contributes to the deterioration of health. In other words, it might be good in the short-term but in long term it will create more health problems and enhance costs. For those reasons, job demands should be redesigned in order not to have undesirable effects on health and managers should create a culture which eliminates the ambiguity about staying at work or going home when sick.

Fortunately, employers are increasingly concerned about the impact of illness in their workforce productive capacity and they are acknowledging that their employers are the most valuable corporate assets and the key to great performance (Loeppke, Hymel, Lofland, Pizzi, Konicki, Anstadt, Baase, Fortuna, Scharf, 2003).

In addition, for Hemp (2004), it is important that employees feel that the organization cares about their well-being. Educating workers about how to better manage their health is crucial to the organizational development and the implementation of health programs is a form of spending to save in the future because it ensures that illnesses aren't going

undiagnosed or being misdiagnosed. The capacity of the companies to manage this kind of problems creates an organizational advantage.

III. Good apples, or presenteeism gains

A simple literature review reveals that about 95% of all articles that have been published so far in the Journal of Occupational Health Psychology deal with negative aspects of workers' health and well-being (Schaufeli & Bakker, 2003). This calls for the need of investigating behaviors from a positive angle.

One of the repercussions of the Positive Psychology has been the change of focus to the comprehension of positive behaviors like engagement (Bakker & Schaufeli, 2008). It has been shown that these states promote the development of skills and resources that allow us to become more resilient in face of adversity.

According to Luthans (2002), resilience is the ability to cope successfully in the face of significant change and risk or, in other words, the positive psychological capacity to deal with adversity, uncertainty, conflict, failure or even positive changes, progress and increased responsibility.

More specifically, Positive Psychology stands for the study of positive characteristics (Cameron, Dutton & Quinn, 2003) while the focus on the negative aspects becomes secondary. In this sense, while some claim presenteeism to be an organizational epidemic we take into account that, like many organizational phenomena, presenteeism may be viewed through an optimistic lenses.

Furthermore, Luthans (2002) has also declared that the emergence of Positive Psychology has reinforced the need for a proactive and positive approach of the organizational behaviors. That emphasizes the positive points and benefits instead of only reinforcing the negative impact of behaviors and the same may be applied to presenteeism, as far as it concerns its theory development, investigation and organizational practices.

Since the identification of this phenomenon, presenteeism has been perceived as a negative organizational behavior. However, this study is based on the assumption that it can also be viewed as a positive behavior, considering its positive outcomes, and a form of organizational citizenship behavior. In other words, in order to maintain the competitive edge, the employee positively contributes to the general efficiency of the organization. As far as we are concerned, we should not only emphasize the deterioration of the health state and the inherent productivity losses but also consider its positive aspects. Thus, we consider that the relation between presenteeism, health state and productivity loss is not linear but variable.

Burton, Pransky, Conti, Chen and Edington (2004) have expressed that various health problems might have a different impact on the execution of particular work competencies or skills. Thus, it comes as a relevant issue to make the distinction between the diseases which are not contagious and that allow people to continue to produce and the diseases which have a serious impact in productivity and only improve by being absent form work for a few days.

On this study, we focus on the fact that presenteeism may constitute a form of organizational citizenship behaviors. Like Organ (1988) has defined, organizational citizenships behaviors (OCBs) are not part of the job description and are performed as a result of a personal choice. Workers do more than what is specifically required by the function and contribute positively to the development of the organization.

OCBs include five dimensions: altruism, that consists of helping behaviors (internal or external to the organization); consciousness, that refers to behaviors that exceed the minimal requirements of the function; civism, which is characterized by a deep concern and active interest in the life of the organization; courtesy, defined by behaviors that prevent work related conflicts; and sportsmanship, which relate to the worker's tolerance giving non-ideal organizational circumstances without complaining or exacerbating his symptoms (Organ, Podsakoff & McKenzie, 2006).

Organizational citizenship behavior can be divided into individual behaviors, in which altruism and courtesy are included, as well as organizational ones, those being consciousness, civism and sportsmanship. In this sense, we define presenteeism as an individual citizenship behavior as it constitutes a productivity catalyst.

Additionally, as Podsakoff, Blume, Whiting and Podsakoff (2009) found, OCBs relate positively to a number of organizational-level outcomes such as performance, productivity, efficiency, reduced costs. Moreover, they relate negatively with absenteeism and turnover.

From Johns (2010) point of view, presenteeism denotes perseverance on the face of adversity and is more common in conscientious people, those who have strong work ethics, those who have internal health locus of control, workaholics and the more psychological resilient.

As argued by the previously mentioned author, presenteeism may be perceived as an OCB and deserve recognition and encouragement within the organizations. Thus, focusing only on the productivity losses, as oppose to its gains when compared to absenteeism, may correspond to a very narrow perspective.

Martinez et al. (2007) have also recognized that presenteeism is an important issue in terms of social responsibility. If well managed by companies, it can certainly constitute a factor of organizational competitive advantage. Hemp (2004) has also highlighted that the invisibility of presenteeism compared to absenteeism makes its management an important source of competitive advantage.

Concerning the work interdependence, Aronson et al. (2005) have also indicated that presenteeism arises as a partial personal compensation due to self-esteem discomfort that comes from compromising the help given to the colleagues and clients in case of sickness.

In terms of productivity and contrary to absenteeism, which represents total productivity losses, the behavior of presenteeism refers to a partial productivity loss that correlates to the specific health problem and is quite variable. For instance, four days of presenteeism may represent a 25% productivity loss, which only equals to one day of productivity loss in case of absenteeism (Middaugh, 2007).

This distinction has also been recognized by Gosselin et al. (2011) by pointing out that the productivity losses due to presenteeism are relative, while absolute in the case of absenteeism. Despite the fact that presenteeism is not easily measured, it is certainly advantageous in comparison to absenteeism because a presentee might be relatively, or even fully, productive (Johns, 2010).

Still regarding the economic impact, Rantanen and Tuominen (2011) consider that the acts of presenteeism are more common among health workers and that the economical repercussion is significant, although not as significant as in the case of absenteeism. For instance, in this study, it was found that the average overall monetary value of presenteeism for a 4-week period was 273.75 Euro per person, while absenteeism value due to health reasons was 373.87 Euro per person. That may explain why some countries, like Norway, are choosing to implement policies that promote presenteeism in order to minimize the absenteeism impact (Krohne et al., 2008).

To the extent that the level of absenteeism is considered to exceed its socially optimal level, possible strategies would be to cut the level of sickness social benefits and/or to hold employers responsible for a larger share of insurance costs (Markussen, Mykletun, & Røed (2010). Additionally, the authors argued that long-term sickness episodes rarely justify complete inactivity since sickness normally reduces an individual's work-capacity, but rarely removes it completely.

Regarding this fact, graded (partial) sickness insurance arrangements, i.e., insurance that covers the reduced productivity while requiring the worker to exploit his remaining work-capacity, might be more compensatory over complete absence. It promotes presenteeism since workers are present at their workplace even when they are sick, but only when the illness is non-infectious and compatible with work. This idea has dominated both European and US welfare and unemployment insurance policies in recent years.

With some variations, the use of graded sickness insurance has been strongly promoted in the Nordic countries and the UK, in the form of a "fit-note". In the "fit-note" physicians are requested to certify whether a sick worker is unfit or (potentially) fit for work. In the latter case doctors may recommend reduced hours or duties, and provide recommendation to employers on how they can help the worker back to ordinary work (Markussen et al., 2010).

Also according to Gosselin et al. (2011) perspective, it is a mistake to limit the concept of presenteeism to its negative impact in productivity as it has positive effects for the worker and the company. In the same line of thought and according to Dew at al. (2005), work environment may, in some situations, offer presenteeism support and present itself as a coping strategy for the individual as well as the organization.

Simpson (1998) has also found evidence of "competitive presenteeism cultures" which are dominated by male managers and in which working elevated hours is encouraged as a form of commitment and maximization of career opportunities and progression. In this case presenteeism reveals itself as an opportunity for organizational development.

Concerning the impact of presenteeism and despite the fact that many consider it as a limitative and inhibiting phenomenon, Brown and Sessions (2004) recognize that presenteeism does not seem to affect everyone in the same way since there's a level below which there are no notorious differences in performance. Therefore, the authors have conceptualized the possibility of a gradual evolution of the health problem to presenteeism processes that inhibit organizational performance.

The study of workers' positive attitudes and their proactive contributions is fundamental to understand the motivational basis of theirs actions and behaviors. Through the analysis of personality features, it appears that the individuals with a high conscientiousness sense promote more changes and limit the occurrence of counter-productive behaviors in the organization (Patel, Budhwar & Varma, 2012).

In terms of management implications, studies have shown that successful companies decide to create structures of optimism and well-being for the workers (Boles et al., 2004), as well as the development of positive organizational behaviors (Peterson & Luthans, 2002).

Additionally, and contrary to the theory that presenteeism contributes to the deterioration of the health status, Bergström, Bodin, Hagberg, Lindh, Aronsson and Josephson (2009), on a study regarding the potential effect of presenteeism on future health, have demonstrated that sickness presenteeism appears to be an independent risk factor for future fair or poor general health.

Regarding the positive impact that presenteeism may have for the individual, work-related health-programming factors rest on the belief that work in general is beneficial for the individuals' health (Waddell, Aylward & Sawney, 2002). Thus, staying active and avoiding the social isolation and inactivity will have a positive effect on individual's health and reduce or avoid sickness absence. This is based on a biopsychosocial approach to illness or disease that focuses on the individual's ability to function within the given environment (Krohne & Brage, 2008).

This idea has also been incorporated by Norwegian government policies. By implementing strategies to prevent sicknesses absence, presenteeism increase is the main objective (Sandman, 2000). On this topic, presenteeism is considered a result of a healthy workplace where people are able to produce, grow and be esteemed (Quick, Camara, Johnsson, Sauter, Hurrell, Piotrkowski & Spielberg, 1997).

One should consider that employees with high levels of job coping and job satisfaction may decide to go to work despite health complaints simply because they want to work, not because of obligation. Pride and confidence at work are previously identified as determinants of healthy work conditions (Nilsson, Hertting, Petterson & Theorell, 2005). In this sense, sickness presenteeism may not be a health risk factor.

Thus, like Waddell and Burton (2006) have stated, when health condition permits, sick and disabled people (particularly those with common health problems) should be encouraged and supported to attend work considering that it is therapeutic, helps to promote recovery and rehabilitation, minimizes the harmful physical, mental and social effects of long-term sickness absence, reduces the risk of long-term incapacity and improves quality of life and well-being.

IV. The role of family-to-work conflict

On the subject of work/family conflict, Greenhaus and Beutell (1985) have defined it as an inter-role conflict in which the role pressures from both domains are mutually non-compatible. The resources required to fulfill such role demands are frequently in a state of imbalance, leading to feelings of conflict between the two domains.

Job and family involvement can be defined as the level of psychological involvement with one's work or family role (Frone, 2003). Thus, individuals high in job or family involvement have a stronger psychological concern with their role in that domain.

Moreover, exposure to stressors in one domain may lead to fatigue, and/or preoccupation with those problems, further restricting one's ability to adequately perform role functions in the other domain. Therefore, those who are more satisfied with their work tend to be less satisfied with family responsibilities and vice versa. Hence, to fully understand the work–family interface, both directions of work–family conflict must be considered (Greenhaus et al., 1985).

Netemeyer, Boles and McMurrian (1996) have also distinguished that the two important focal points of adult life are family and work. On one hand, work-to-family conflict is a form of inter-role conflict in which the general demands of the job, time devoted to it and the associated strain interfere with performing family-related responsibilities. On the other hand, family-to-work conflict is a form of inter-role conflict in which the general demands of the family, time devoted to it and the associated strain interfere with performing work-related responsibilities. The general demands of each role include the responsibilities, requirements, duties, commitments, and expectations related to the respective domain.

Furthermore, there are three distinct types of conflict: i) time-based conflict results from the use of a limited time and occurs when the time spent in one role makes it difficult to comply with expectations from another role; ii) strain-based conflicts exist when elements of one role cause stress and tension that affect performance in the other role; and iii) behavior-based conflict occurs when patterns of behaviour in one role are incompatible with behavioural expectations in the other (Bruck & Allen, 2003).

However, work-to-family conflict and family-to-work conflict have different predictors and consequences. On this topic, Anderson, Coffey and Byerly (2002) presented that work-to-family conflict is linked to job dissatisfaction, turnover intentions and stress while family-to-work conflict is linked to other factors, namely stress and absenteeism.

There is evidence that family-to-work conflict is the less studied of the two topics, probably due to the fact that work demands are easier to quantify (Gutek, Searle & Kepla, 1991). However, there is evidence that it is associated with a number of dysfunctional outcomes (Bacharach, Bamberger & Conley, 1990), such as decreased family and occupational well-being (Kinnunen & Mauno, 1998), and job and life dissatisfaction (Netemeyer et al., 1996).

Additionally, family-work literature suggests that family matters may conflict with work due to a shortage in time and energy, resulting in feelings of burnout at work (Ten Brummelhuis, Bakker & Euwema, 2010). Furthermore, when family life interferes with work, the employee is unfocused at work, which may result in reduced work engagement (Kinnunen et al., 1998).

Regarding other possible outcomes, studies have shown that employees experiencing high levels of family–work interference report more feelings of stress at work, more health complaints and depression, reduced job satisfaction and poorer job performance (Adams & Jex, 1999). Moreover, it has been demonstrated that family-to-work conflict relates positively with presenteeism and the associated productivity losses and another finding was that absenteeism is positively related to family-to-work conflict (Johns, 2011).

Thus, we expect that family-to-work conflict correlates positively with productivity losses due to presenteeism and presenteeism losses. On the contrary, we expect the relationship between family-to-work conflict and presenteeism gains to be negative:

H1: Family-to-work conflict is positively associated with productivity losses due to presenteeism.

H2: Family-to-work conflict is positively associated with presenteeism losses (bad apples).

H3: Family-to-work conflict is negatively associated with presenteeism gains (good apples).

V. The role of negative affects

Negative affect and mood are central concepts for researchers in social and behavioral sciences it corresponds to a general dimension of subjective distress and unpleasant engagement that includes a variety of aversive mood states, including anger, contempt, disgust, guilt, fear, and nervousness, with low negative affect being a state of calmness and serenity (Watson, Clark & Tellegen, 1988).

Furthermore, Watson (2000) has clarified that affective dispositions can be distinguished from moods and emotions in that the former are stable individual differences in a person's tendency to feel a certain way that persists over time and across situations, while the latter are transient feelings.

Watson and Clark (1984) have defined negative affectivity as a mood-dispositional dimension that reflects individual differences in negative emotionality and self-concept. Consequently, individuals with high negative affect are more likely to experience discomfort at all times and across diverse situations. They are relatively more introspective and tend to focus on the negative side of themselves and the world.

These negative experiences such as feelings of nervousness, guilt and anxiety that individuals high on negative affectivity are likely to experience generalize across various domains of life, including work and family (Watson, Wiese, Vaidya & Tellegen, 1999). Moreover, individuals high in negative affectivity are described as predisposed to experience aversive mood states, distress and negative emotions (Watson, et al., 1988).

Additionally, negative affectivity is frequently associated with anxiety and general dissatisfaction. It influences how people view and respond to certain elements of their life. Elevated levels of negative affectivity have been linked to increased levels of subjective stress and job strain. On the whole, negative affect appears to be closely associated with stress and both constructs are often studied together. Apart from stress research, there is interest in the role of negative affect in health (Stone & Gorin, 2007).

Everyday experience suggests that people are not always in the same mood and that it may fluctuate from day to day and, in line with this, there is convincing empirical evidence for these fluctuations (Ohly, Sonnentag, Niessen & Zapf, 2010). For that matter, positive and negative affects are commonly used in daily diary studies.

Negative mood states lead to lower performance as opposed to positive affects (Erez & Isen, 2002). Because unmotivated individuals will perform poorly, the depressive cycle of failure to negative mood states will be self-reinforcing and may have increasingly strong negative impacts on performance over repeated performance events (Judge & Kammeyer-Mueller, 2008).

Still, the amount of positive affect experienced by an employee will significantly influence the employee's intention to perform specific acts of organizational citizenship which refer to organizational desirable and beneficial acts that are not a part of the formal work requirements (Williams & Schiaw, 1999). Thus, we expect that the intention of engaging in organizational citizenship behaviors' like presenteeism may increase as employee affect state becomes more positive and decrease with negative affect.

So, on one hand, we predict that employees will report higher levels of productivity losses due to presenteeism when they experience negative affects. On the other hand, we predict that employees will report higher levels of presenteeism losses and lower levels of presenteeism gains when they experience negative affects:

H4: Negative affects will be positively associated with productivity losses due to presenteeism, so that employees will report higher levels of productivity losses due to presenteeism in periods where they experience more negative affects, compared to periods when they experience less negative affects.

H5: Negative affects will be positively associated with presenteeism losses (bad apples), so that employees will report higher levels of presenteeism losses in periods where they experience more negative affects, compared to periods when they experience less negative affects.

H6: Negative affects will be negatively associated with presenteeism gains (good apples), so that employees will report higher levels of presenteeism gains in periods where they experience less negative affects, compared to periods when they experience more negative affects.

VI. The role of burnout

Burnout comes as a critical issue for organizations since it has an important impact on productivity (Kahn, Schneider, Jenkins-Henkelman & Moyle, 2006). It is also known that burnout tends to develop rupture organizational behaviors such as absenteeism and turnover (Maslach et al., 2001).

Maslach and Jackson (1986) have stated that burnout can be conceptualized as three distinct dimensions: i) emotional exhaustion (feeling of emotional and physical overextension); ii) personal accomplishments (feelings of success and competence); and iii) cynicism (associated with the lack of personal responses and the absence of feelings towards other people).

The first dimension of burnout measures fatigue without referring to other people as a source of it. Professional efficacy involves both social and non-social aspects of occupational accomplishments. Finally, cynicism reflects indifference or a distant attitude towards work in general. Maslach General Burnout Inventory-General Survey's (MGBI-GS) high scores on exhaustion and cynicism and low scores of professional efficacy are indicative of burnout (Maslach et al., 1986).

However, burnout was later defined by Maslach et al. (2001) as a multifaceted syndrome of emotional exhaustion, depersonalization and reduced personal accomplishment. The authors explained that emotional exhaustion refers to the reduction of emotional, moral and psychological resources. Depersonalization is characterized by emotional indifference towards the others (clients and patients) and detachment from reality and the self. Finally, personal accomplishment expresses a decrease in feelings of competence and pleasure associated with a professional activity.

It was initially thought to be associated with specific jobs (physicians, nurses, lawyers and teachers) but investigation has shown that it extends to all professional activities (Schaufeli, Leiter, Maslach & Jackson, 1996) as well as students (Maroco & Tecedeiro, 2009). Furthermore, Ferreira et al. (2012) found a positive correlation between presenteeism and job burnout among elementary school teachers.

However, Rössler (2012) has argued that the risk of burnout is still significantly higher in certain occupations such as health care workers that beyond the effects of an extensive workload, many working hours or long night shifts, have specific stressors since they work in demanding environments with patients, families and other medical staff.

The professional staff in human services institutions are often required to spend considerable time with other people and the interaction is frequently around the clients' current problems. For those workers who work continuously with people under serious circumstances of chronic stress, anger, fear and despair, the job can be emotionally draining and poses the risk of burnout (Maslach et al., 2008).

Moreover, Tecedeiro (2005) has described that burnout is related to a relevant personal suffering that is manifested through excessive consumption of drugs, alcohol and others psychotropic substances, productivity losses, increase of absenteeism, prolonged sick leaves, serious depressive episodes and severe psychosomatic disturbances.

Complementarily, those who exhibit workaholism tend to demonstrate higher levels of presenteeism. As defined by Schaufeli, Bakker, van der Heijden and Prins (2009), workaholics tend to work excessively and compulsively, and they are internally motivated to work to an excessive extent. In addition to their high levels of presenteeism, it was also discovered that workaholics display the highest burnout and lowest happiness levels.

The same authors demonstrated that psychological conditions, such as high levels of stress and lack of emotional fulfillment, are crucial to understand presenteeism. Likewise, Johns (2010) also found a relationship between burnout and productivity losses due to presenteeism. Moreover, Fritz and Sonnentag (2005) investigation brought to light that staying away from work contributes to the reduction of burnout. Following the previous ideas, one may infer that:

H7: Burnout will be positively associated with productivity losses due to presenteeism, so that employees will report higher levels of productivity losses due to presenteeism in periods where they experience more burnout, compared to periods when they experience less burnout.

H8: Burnout will be positively associated with presenteeism losses (bad apples), so that employees will report higher levels of presenteeism losses in periods where they experience more burnout compared to periods when they experience less burnout.

H9: Burnout will be negatively associated with presenteeism gains (good apples), so that employees will report higher levels of presenteeism gains in periods where they experience less burnout, compared to periods when they experience more burnout.

VII. The role of engagement

As a result of the emergence of Positive Psychology, work engagement must be valued (Schaufeli et al., 2003) since engaged workers care about the organization future and are willing to make an effort for the organization to succeed. It has been verified that engaged employees are more productive and may offer organizations a competitive advantage (Bakker, Schaufeli, Leiter & Taris, 2008).

According to Maslach and Leiter (1997), engagement is characterized by energy, involvement, and efficacy, the direct opposites of the three burnout dimensions. It is argued that, in the case of burnout, energy turns into exhaustion, involvement into cynicism, and efficacy into ineffectiveness. Contrary to those who suffer from burnout, engaged employees have a sense of energetic and effective connection with their work, and instead of stressful and demanding they look upon their work as challenging (Bakker et al., 2008).

In organizational context, engagement is characterized as a positive state of mind that is pleasurable for workers (Schaufeli & Bakker, 2004). It relates to feelings of energy/vigor, dedication and absorption in work (Bakker et al., 2008) and to mental health as well (Schaufeli, Bakker & van Rhenen, 2009).

Considering its three dimensions, vigor implies being energetic and mentally resilient at work as well as being able to persist despite the difficulties. Dedication relates to feeling enthusiastic and inspired as well as experiencing pride and dedication at work. Lastly, absorption is described as a total concentration on the job and the experience of feeling happy while performing working tasks (Bakker et al., 2008).

Furthermore, according to Xanthopoulou, Bakker, Heuven, Demerouti and Schaufeli (2008), engagement not only differs between persons but there are also individual fluctuations from day to day and throughout the day. In other words, although a person's general level of work engagement is fairly stable over time, a person's day-specific level of work engagement fluctuates substantially around a person's average level of work engagement (Sonnentag, Dormann & Demerouti, 2010).

These variations of work engagement within persons can be explained by specific experiences and events (Kühnel, Sonnentag & Bledow, 2012) and they predict systematic variations in outcomes, such as proactive behavior and financial returns (Sonnentag, 2003).

Schaufeli et al. (2004) study has focused on burnout and its positive antipode - engagement - and came to the conclusion that this two constructs are negatively related. The

fact that burnout and engagement exhibit different patterns of possible causes and consequences implies that different intervention strategies should be used when burnout is to be reduce or engagement is to be enhanced.

One of the repercussions of Positive Psychology has been a re-focus in positive organizational behaviors, such as engagement (Bakker et al., 2008). Thus, whilst burned-out workers feel exhausted and cynical, the engaged ones feel vigorous and enthusiastic about their work (Schaufeli et al., 2003).

Furthermore, Bakker et al. (2008) have revealed that engagement is a unique concept that is best predicted by job resources (e.g., autonomy, supervisory coaching and performance feedback) and personal resources (e.g., optimism, self-efficacy and self-esteem).

In this sense, we assume that engagement fluctuations may vary with health problems but ultimately correspond to productivity gains. If engagement is associated with burnout and burnout is positively associated to presenteeism, it becomes relevant to examine if relationship between engagement and presenteeism losses is negative. Thus, we predict that engagement (vigor, dedication and absorption) relates negatively with productivity losses due to presenteeism and presenteeism losses. Additionally, we predict that engagement (vigor, dedication and absorption) relates positively with presenteeism gains:

H10: Engagement will be negatively associated with productivity losses due to presenteeism, so that employees will report higher levels of productivity losses due to presenteeism in periods where they experience more engagement, compared to periods when they experience less engagement.

H10a: Vigor will be negatively associated with productivity losses due to presenteeism, so that employees will report higher levels of productivity losses due to presenteeism in periods where they experience more vigor, compared to periods when they experience less vigor.

H10b: Dedication will be negatively associated with productivity losses due to presenteeism, so that employees will report higher levels of productivity losses due to presenteeism in periods where they experience more dedication, compared to periods when they experience less dedication.

H10c: Absorption will be negatively associated with productivity losses due to presenteeism, so that employees will report higher levels of productivity losses due to presenteeism in periods where they experience more dedication, compared to periods when they experience less dedication.

H11: Engagement will be negatively associated with presenteeism losses (bad apples), so that employees will report lower levels of presenteeism losses in periods where they experience more engagement, compared to periods when they experience less engagement

H11a: Vigor will be negatively associated with presenteeism losses (bad apples), so that employees will report lower levels of presenteeism losses in periods where they experience more vigor, compared to periods when they experience less vigor.

H11b: Dedication will be negatively associated with presenteeism losses (bad apples), so that employees will report lower levels of presenteeism losses in periods where they experience more dedication, compared to periods when they experience less dedication.

H11c: Absorption will be negatively associated with presenteeism losses (bad apples), so that employees will report lower levels of presenteeism losses in periods where they experience more absorption, compared to periods when they experience less absorption.

H12: Engagement will be positively associated with presenteeism gains (good apples), so that employees will report higher levels of presenteeism gains in periods where they experience more engagement, compared to periods when they experience less engagement.

H12a: Vigor will be positively associated with presenteeism gains (good apples), so that employees will report higher levels of presenteeism gains in periods where they experience more vigor, compared to periods when they experience less vigor.

H12b: Dedication will be positively associated with presenteeism gains (good apples), so that employees will report higher levels of presenteeism gains in periods where they experience more dedication, compared to periods when they experience less dedication.

H12c: Absorption will be positively associated with presenteeism gains (good apples), so that employees will report higher levels of presenteeism gains in periods where they experience more absorption, compared to periods when they experience less absorption.

VIII. Method

Procedure and participants

Study 1

Study 1 consisted on the development and validation of a scale with the purpose of measuring the good and bad apples of presenteeism. This idea has arisen since there is no evidence of the existence of a scale that measures the negative and positive impact of presenteeism, apart from the ones related to productivity losses. In order to validate the instrument a convenience sampling was constituted.

Several persons were contacted by e-mail and asked to fill the scale which was applied to a total of 105 participants (68% female). The participants' average age was 33.6 (SD=8.632). They had an average professional experience of 9.8 years (SD=7.711) and an average tenure at their organization of 5.6 years (SD=67.935). Concerning the professional category, the sample was diverse with 16.2% intervention assistants, 12.4% bankers, 10.5% social workers, 9.5% psychologists, 4.8% IT engineers and 3.8% other white-collar workers. The remaining 42,8% referred to a wide range of other jobs. 22% occupied a leadership position.

Study 2

Sudy 2 intended to examine the relationship between presenteeism and six different variables. Therefore numerous hypotheses were tested. The study required participants to complete a questionnaire at the start (Part I) and a diary questionnaire for ten working days (Part II).

Daily diary studies allow for the studying of thoughts, feelings and behaviors within the natural work context as well as fluctuations on a daily basis. They are used to captures the short-term dynamics of experiences within and between individuals in the work context (Ohly et al., 2010).

Being a longitudinal study, the presented daily diary study allows access to personal experiences related to a certain period of time and context. It is valuable in the study of rare events and its ecological validity has been proven. In this case it is useful to comprehend

presenteeism since it provides information about daily fluctuations in workers' health state as well as their productivity in case of presenteeism.

One private social institution, located in Lisbon, was approached in March 2013 to collaborate in this investigation. Since authorization was granted, the participants were briefed in groups of no more than 5 persons in order to explain the aim of the study and how the questionnaires should be filled in. In case of agreement informed consent was signed. Questionnaires were collected in the last day of filling in.

Questionnaires were applied to 42 workers of a private social institution (88% females). The participants' average age was 35.1 (SD=10.275). They had an average professional experience of 9.6 years (SD=8.164) and an average tenure at the organization of 4.2 years (SD=42.65). The participants' average weekly working hours was 38.05 (SD=3.522).

This sample consisted of different professional occupations though everyone worked with clients (children, elderly people or deprived families). In terms of category, 38.1% were intervention assistants (caregivers), 11.9% case managers, 9.5% cleaning aids, 7.1% educative assistants and 4.8% white-collar workers. The remaining 28.6% referred to other jobs. About 11.9% occupied a leadership position.

Regarding health, back problems (33.3%), headaches (9.5%), allergies (7.1%), asthma (7.1%), eye problems (7.1%) and sore legs (4.8%) were the most common physical problems. From all physical problems, 36.4% corresponded to chronic ones. Anxiety (35.7%), depression (9.5%), psychological fatigue (7.1%) and stress (7.1%) dominated the psychological problems. From all psychological problems, 21.4% corresponded to chronic ones.

Measures

Study 1

Based on the revision of literature, a scale to assess presenteeism gains and losses (good apples and bad apples) has been empirically developed and presented to experts for approval. Evidence of content and construct validity to support the intended purpose was confirmed.

Study 2

Questionnaire data

In Part I, with the questionnaire filled on the first day, one variable was assessed. Participants were asked to indicate the extent to which each statement characterizes them on a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Family-to-work conflict was assessed with five items (Netemeyer et al., 1996). "Good apples and bad apples" were measured with the four items, each from the scale previously developed and validated in Study 1.

In Part II, the weekly diary was filed during ten continuous working days. These measures reflect the persons' levels for those characteristics on the specific occasions tested. Daily survey items were selected from validated and reliable scales.

Productivity loss due to presenteeism was measured using the six-item short form of the Stanford Presenteeism Scale (SPS-6; Koopman et al., 2002) and the following item: "Due to my health problem, in a scale of 0 to 100, my productivity remained the same/ has reduced __% (strikethrough what is not applicable)". The SPS-6 measures were rated on a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Items 2, 5 and 6 were reversed scored. Note should be made that we used this instrument for it is the most generic, and the simplest to apply on a daily basis, as well.

Good apples and bad apples were assessed with eight-item scale developed and validated in Study 1. All measures were rated on a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Negative affect was measured using the ten negative items from Positive and Negative Affect Schedule – PANAS (Watson et al., 1988) which have a five-point scale ranging from 1 (very slightly or not at all) to 5 (extremely).

Burnout was assessed with three-item Maslach Burnout Inventory General Survey – MBI-GS (Maslach, Jackson, Leiter, Schaufeli & Schwab, 1996) and all measures were also rated on a seven-point scale ranging from 0 (never) to 6 (always).

Engagement was measured using the nine-item (three items for each dimension of vigor, dedication and absorption) adapted for daily use version of Utrecht Work Engagement Scale (Schaufeli, Bakker & Salanova, 2006) rated on a seven-point scale ranging from 0 (never) to 6 (always).

Productivity self-perception was assessed with the question "In a scale of nine points how do you consider your productivity today?".

Finally, with the expectation of assessing people's motivation to engage in presenteeism the following question was made: "In the case of having either a physical or psychological problem what made you go to work today?".

Weekly diary data

We focused on weekly changes since, as Zaheer, Albert and Zaheer (1990) argued, it is the variability of the phenomenon that one wishes to observe that should guide the choice of the time scale (the length of the temporal interval used to test the theory). All participants worked on social services with children, elderly people and low-income families. Given the fact that different situations occur on a daily basis we thought it would be adequate to measure changes in productivity losses due to presenteeism, presenteeism gains and losses at a week level. Data was analyzed with hierarchical linear modeling (Heck, Thomas & Tabata, 2010).

To test the hypothesized interaction effects, the variables were entered in three steps. After the estimation of the intercept-only model (the null model contains no explanatory variables), family-to-work conflict was entered (Model 1). In Model 2, negative affect and burnout were entered. Finally, in Model 3, vigor, dedication and absorption terms were added. The improvement of each model over the previous one was tested using the difference between the respective likelihood ratios. This difference follows a chi-square distribution (degree of freedom equal to the number of new parameters added to the model).

IX. Results

Study 1

To investigate about the validity of the scale constructs, PCA and Varimax rotation were performed. Kaiser-Meyer-Olkin (KMO=0.80) indicator was also calculated showing that there are no problems concerning data identity and that the correlations between the items were sufficient and adequate. As a criterion for extracting the components we considered three procedures: Kaiser-Guttmann method (eigenvalues greater than 1), Scree test analysis and Velicer test (Minimum Average Partial Test-MAP); O'Connor, 2000).

The percentage of variance explained by the two components obtained was 61.78%. This value is acceptable since satisfactory values are those ranging from 40 to 60% (Pasquali, 1999). Then we proceeded to the analysis of the scale's matrix components, in order to identify the items associated with the two components extracted. Through the interpretation of the factor structure, we obtained a first component that explains 34.19% of the results' variance, being composed by items related to presenteeism gains. The second component has a variance explained of 27.58% and corresponds to the presenteeism losses dimension. Finally, Cronbach´s coefficient alpha for bad apples was 0.65 and for good apples 0.74.

Study 2

The average of presenteeism days (in the last six months) was 60.77 (SD=65.013). Participants' average state of health was 3.27 (SD=0.775) with that meaning "good". Participants' average of productivity in case of presenteeism was 4.85 (SD=1.216) which refers to being "slightly below average".

Means, standard deviations and correlations are displayed in Table 8.1. For calculating the correlations between day-level and person-level variables, day-level variables were averaged across the ten day. Regarding productivity losses due to presenteeism, 41% of variance could be attributed to between-person variation. Considering presenteeism losses, 31% of variance could be associated with between-person variation. As for presenteeism gains, 38% of variance could be attributed to within-person variation. These findings suggest that productivity losses due to presenteeism, presenteeism gains and presenteeism losses are

not stable over time but fluctuate considerably, thereby supporting the application of multilevel analysis.

Table 8.1: Means, standard deviations and correlations between the study variables

	M	SD	1	2	3	4	5	6	7	8
1. SPS-6	2.50	0.76								
2. BA	2.30	0.74	0.57***							
3. GA	3.45	0.75	-0.01	0.09						
4. FWC	0.00	0.61	0.07	0.13**	0.26***					
5. NA	-0.00	0.49	0.40***	0.23***	0.02	0.17**				
6. BUR	-0.00	1.26	0.49***	0.41***	0.06	0.11**	0.39***			
7. VIG	0.00	1.19	-0.54***	-0.40***	-0.03	-0.04	-0.32***	-0.52***		
8. DED	0.00	1.28	-0.39***	-0.28***	0.02	-0.04	-0.20***	-0.37***	0.68***	
9. ABS	-0.00	1.01	-0.40***	-0.32***	0.03	-0.12**	-0.22***	-0.36***	0.74***	0.70***

Note: M = mean; SD = standard deviation errors; SPS-6 = Stanford Presenteeism Scale-6; BA = bad apples; GA = good apples; FWC = family-to-work conflict; NA = negative affect; BUR = burnout; VIG = vigor; DED = dedication; ABS = absorption.

$^{t}p < 0.05$. ** $p < 0.03$. *** $p \leq 0.001$.

Test of hypotheses

Hypothesis 1 stated that family-to-work conflict is positively associated with productivity losses due to presenteeism. Hypothesis 4 stated that negative affects will be positively associated with productivity losses due to presenteeism. Hypothesis 7 stated that burnout will be positively associated with productivity losses due to presenteeism. Hypothesis 10 stated that engagement will be negatively associated with productivity losses due to presenteeism. Hypotheses 10a, 10b and 10c stated that vigor, dedication and absorption will be negatively associated with productivity loss due to presenteeism, respectively.

Table 8.2 displays model fit information (difference of -2 x Log) and estimates for the fixed and random parameters. Model 1, which included family-to-work conflict, was compared to the null model, which included only the intercept. Model 1 showed no significant improvement over the null model (Δ -2 x log = -1.78, $df = 1$, $p > 0.05$) and Hypothesis 1 was not supported. In Model 2, negative affect and burnout were entered. Model 2 showed further

improvement over Model 1 (Δ -2 x log = 128,38, *df* = 2, $p < 0.001$). In support of Hypotheses 4 and 7, negative affect and burnout positively predicted productivity losses due to presenteeism. In Model 3, engagement three dimensions were entered (vigor, dedication and absorption). Model 3 showed further improvement over Model 2 (Δ -2 x log = 49.61, *df* = 3, $p < 0.001$). In support of hypothesis 10a, vigor negatively predicted productivity losses due to presenteeism. Hence, Hypotheses 10, 10b and 10c were not supported.

Table 8.2: Multilevel estimates for models predicting productivity losses due to presenteeism (SPS-6)

Parameter	Null Model	Model 1	Model 2	Model 3
Fixed effects				
Intercept	2.51** (0.08)	2.50** (0.08)	2.51** (0.06)	2.49** (0.06)
Family-to-work conflict		0.09 (0.12)	0.00 (0.92)	0.03 (0.09)
Negative affect			0.40** (0.08)	0.34** (0.08)
Burnout			0.26** (0.04)	0.11* (0.04)
Vigor				-0.24** (0.04)
Dedication				-0.04 (0.03)
Absorption				-0.04 (0.05)
Random Parameters				
Level 2 Intercept	0.41** (0.03)	0.41** (0.03)	0.34** (0.03)	0.27** (0.02)
Level 1 Intercept	0.17* (0.05)	0.18* (0.05)	0.07* (0.03)	0.09* (0.03)
-2 x log likelihood	818.41	820.19	691.81	642.20
Difference of -2 x log		-1.78	128.38*	49.61*
df		1	2	3

Note: Standard deviation errors are between parenthesis.
[t] $p < 0.05$. ** $p < 0.03$. *** $p \leq 0.001$.

Hypothesis 2 stated that family-to-work conflict is positively associated with presenteeism losses. Hypothesis 5 stated that negative affect is positively associated with presenteeism losses. Hypothesis 8 stated that burnout is positively associated with presenteeism losses. Hypothesis 11 stated that engagement will be negatively associated with presenteeism losses. Hypotheses 11a, 11b and 11c stated that vigor, dedication and absorption will be negatively associated with presenteeism losses, respectively.

Tables 8.3 displays model fit information (difference of -2 x Log) and estimates for the fixed and random parameters. Model 1, which included family-to-work conflict was

compared to the null model, which included only the intercept but showed no significant improvement (Δ -2 x log = -0.98 *df* = 1, $p > 0.05$) and Hypothesis 2 was not supported. In Model 2, negative affect and burnout were entered. Model 2 showed further improvement over Model 1 (Δ -2 x log = 79.63 *df* = 2, $p < 0.001$). In support of Hypotheses 5 and 8, negative affect and burnout positively predicted presenteeism losses. In Model 3, engagement three dimensions were entered (vigor, dedication and absorption). Model 3 showed further improvement over Model 2 (Δ -2 x log = 26.82, *df* = 3, $p < 0.001$). In support of Hypothesis 11a, vigor negatively predicted presenteeism losses. Hence, Hypotheses 11, 811b and 11c were not supported.

Table 8.3: Multilevel estimates for models predicting presenteeism losses (Bad Apples)

Parameter	Null Model	Model 1	Model 2	Model 3
Fixed effects				
Intercept	2.30** (0.08)	2.30** (0.08)	2.31** (0.08)	2.30** (0.08)
Family-to-work conflict		0.15 (0.14)	0.06 (0.13)	0.09 (0.13)
Negative affect			0.22* (0.08)	0.19* (0.07)
Burnout			0.20** (0.04)	0.07 (0.04)
Vigor				-0.19** (0.04)
Dedication				-0.03 (0.03)
Absorption				-0.04 (0.05)
Random Parameters				
Level 2 Intercept	0.31** (0.03)	0.31** (0.03)	0.26** (0.02)	0.23** (0.02)
Level 1 Intercept	0.24** (0.06)	0.24** (0.07)	0.20** (0.06)	0.23** (0.06)
-2 x log likelihood	701.37	702.35	622.72	595.90
Difference of -2 x log		-0.98	79.63*	26.82*
df		1	2	3

Note: Standard deviation errors are between parenthesis.
[t] $p < 0.05$. ** $p < 0.03$. *** $p \leq 0.001$.

Hypothesis 3 stated that family-to-work conflict is negatively associated with presenteeism gains. Hypothesis 6 stated that negative affect is negatively associated with presenteeism gains. Hypothesis 9 stated that burnout is negatively associated with presenteeism gains. Hypothesis 12 stated that engagement will be positively associated with presenteeism gains. Hypotheses 12a, 12b and 12c stated that vigor, dedication and absorption will be positively associated with presenteeism gains, respectively.

Tables 8.4 displays model fit information (difference of -2 x Log) and estimates for the fixed and random parameters. Model 1, which included family-to-work conflict was compared to the null model, which included only the intercept, but showed no significant improvement (Δ -2 x log = 3.19, df = 1, $p > 0.05$) and Hypothesis 3 was not supported. In Model 2, negative affect and burnout were entered. Model 2 showed further improvement over Model 1 (Δ -2 x log = 33.21 df = 2, $p < 0.001$). In support of Hypotheses 3, family-to-work conflict positively predicted presenteeism gains. Hypotheses 6 and 9 were not supported. In Model 3, engagement three dimensions were entered (vigor, dedication and absorption). Model 3 showed no further improvement over Model 2 (Δ -2 x log = -7.11, df = 3, $p < 0.001$). Hence, Hypotheses 12,12a, 12b and 12c were not supported.

Table 8.4: Multilevel estimates for models predicting presenteeism gains (Good Apples)

Parameter	Null Model	Model 1	Model 2	Model 3
Fixed effects				
Intercept	3.40** (0.10)	3.40** (0.09)	3.42** (0.09)	3.43** (0.10)
Family-to-work conflict		0.35* (0.15)	0.34^{t} (0.16)	0.34^{t} (0.16)
Negative affect			0.08 (0.08)	0.10 (0.08)
Burnout			-0.04 (0.04)	0.00 (0.04)
Vigor				0.02 (0.04)
Dedication				0.02 (0.03)
Absorption				0.08 (0.05)
Random Parameters				
Level 2 Intercept	0.22** (0.02)	0.22** (0.02)	0.21** (0.02)	0.21** (0.02)
Level 1 Intercept	0.38* (0.09)	0.34** (0.08)	0.34** (0.08)	0.35** (0.09)
-2 x log likelihood	644.10	640.91	607.60	614.81
Difference of -2 x log		3.19	33.21*	-7.11
df		1	2	3

Note: Standard deviation errors are between parenthesis.
^{t} $p < 0.05$. ** $p < 0.03$. *** $p \leq 0.001$.

Discussion

Regarding the Positive Psychology paradigm, we conducted this study with the assumption that the organizational act of presenteeism might be seen as an individual citizenship behavior, since it constitutes a form of loyalty towards the organization in which the worker is integrated (Bierla et al., 2012).

Since no instrument to measure the positive impact of presenteeism exists, a scale to measure presenteeism losses and gains has been developed and validated. Then, and in an attempt to better understand the complexity of the phenomena (Baker-McClearn et al., 2010), as well as to integrate the positive aspects of presenteeism we took a within-individual approach to examine the relationship between productivity losses due to presenteeism, presenteeism losses and presenteeism gains and six variables: family to-work conflict, negative affect, burnout and engagement's three dimensions (vigor, dedication and absorption).

Contrary to expectations and Johns' (2011) findings, family-to-work conflict did not relate positively with productivity losses due to presenteeism and presenteeism losses. On the contrary, results showed that family-to-work conflict related positively with presenteeism gains, which may open the possibility of a new perspective about positive outcomes, such as productivity, instead of limiting the phenomenon to its negative impact on productivity.

Considering negative affects, results confirmed a positive relationship between negative affects and productivity losses due to presenteeism (Erez et al., 2002). On this topic, it was also found that negative affects relate positively with presenteeism losses. However, no significant relation was found between negative affects and presenteeism gains, like Williams et al. (1999) have preconized about positive affects and organizational citizenship behaviors.

Regarding burnout, results showed that it correlates positively with productivity losses, so that workers will report higher levels of productivity loss due to presenteeism when they experience burnout. These results support the idea that burnout is associated with presenteeism losses (Boles et al., 2004) and no relation was found between this variable and presenteeism gains.

As for engagement, only vigor revealed to be significant. Results showed a negative relationship between vigor and productivity losses due to presenteeism and presenteeism losses as well. In other words, employees will report lower levels of productivity loss due to presenteeism and lower levels of presenteeism losses when they experience vigor, which

corresponds to high levels of energy and mental resilience while working. These findings partially support the idea that engagement is a positive organizational behavior (Bakker et al., 2008) that relates to productivity gains, though no relationship between this construct and presenteeism gains was found.

Furthermore, when investigating presenteeism, several notions should be taken into account. First, overall health plays an important role, since the decision on engaging presenteeism depends on the severity of the health problems and associated symptoms (Khrone et al., 2011).

Second, like Brown et al. (2004) recognized, presenteeism does not seem to affect everyone in the same way in terms of productivity losses. Regarding these facts, diagnosing the problem and making the distinction between what is unbearable or not is imperative (Gosselin et al., 2011).

Third, different health problems have a different impact in different occupations (Burton et al., 2004). On this topic, Pransky et al. (2004) have also argued that different health problems might have a different impact on the execution of particular work competencies or skills.

On the topic of productivity losses due to presenteeism, and comparing it with absenteeism, levels are higher in a situation of absenteeism (Middaugh 2007). Additionally, productivity losses due to presenteeism are relative, while absolute in the case of absenteeism (Gosselin et al., 2011). Moreover, regarding the economic impact, Rantanen et al. (2011) found that the economical repercussion of presenteeism is significant, but not as significant as in the case of absenteeism.

In terms of health impact, and contrary to the theory that presenteeism contributes to the deterioration of the health status, Bergström et al. (2009) have demonstrated that sickness presenteeism appears to be an independent risk factor for future fair or poor general health.

Moreover, staying active and avoiding the social isolation associated with illness will have a positive effect on individual's health and reduce or avoid sickness absence (Krohne et al., 2008). In addition, Waddell et al. (2006) have stated that, in some cases, people should be encouraged to attend work considering that it promotes recovery, minimizes the harmful physical, mental and social effects of long-term sickness absence and improves quality of life and well-being.

Regarding these facts and taking into account the presenteeism gains, Norwegian government has implemented policies to promote presenteeism and prevent sicknesses absence (Sandman, 2000).

Furthermore, like Luthans (2002) has pointed out, Positive Psychology emphasizes the positive aspects of the organizational behaviors and the same may be applied to presenteeism. In this sense, we believe that the act of presenteeism may be considered an individual citizenship behavior since OCBs relate positively to a number of organizational outcomes such as performance, productivity, efficiency, reduced costs (Podsakoff et al., 2009).

Work related factors seem to be slightly more important than personal ones in determining people's decision to go ill at work (Hansen et al, 2008). Thus, management policies should be implemented in order to create positive work environment, since it may help to reduce health risks and improve productivity (Cancelliere et al., 2011).

For Hemp (2004), employees should feel that the organization cares about their health state. Fortunately, employers are increasingly concerned about the impact of illness in the workforce and about creating conditions to promote employees' well-being (Loeppke et al., 2003) and the development of positive organizational behaviors (Peterson et al., 2002). Moreover, presenteeism is a symptom that must be diagnosed and treated (Middaugh, 2007).

Alleviating and managing health problems should improve productivity significantly, not only through lower absenteeism but also by increasing presenteeism (Koopman et al., 2002). Disease management, disability management, optimal pharmaceutical utilization and health promotion programs lead to less medical costs and productivity losses (Loeppke et al., 2003).

Furthermore, the implementation of work health programs that help employees cope with health problems (Hemp, 2004) may represent a significant improvement in the workers' quality of life and productivity. This is linked to management and policies' changes, such as the case of Norway, where the main objective is to increase presenteeism by providing the ideal conditions to work despite being ill (Quick et al., 1997). In this sense, adjustment latitude should also be implemented.

Thus, according to Martinez et al. (2007), and given the Positive Psychology paradigm, organizations that intend to achieve success must take into account the workers' needs and create structures that optimize their well-being. That will consequently favor the development of positive organizational behaviors or, in other words, the organizational citizenship behaviors, in which presenteeism may be included. The results of our study

highlighted the importance of reducing negative affects and burnout in the workforce as well as promoting work engagement, more specifically vigor (being energetic at work and able to persist despite the difficulties). This may be obtained with health programs and flexible policies that allow the worker to adjust his work to the health problem, like those applied by Nordic countries.

Strengths, limitations and suggestions for future research

This study is innovative in a number of ways. First, presenteeism is acknowledged as an individual citizenship behavior since the person sacrifices for the sake of the organization effectiveness. This new perspective takes into account that its benefits may be more significant that its negative impact, despite it is mostly viewed as a negative organizational behavior. Based on that assumption, a scale to measure presenteeism gains and losses was created.

Secondly, we developed this investigation in the work context and used a within-subject design to examine the relationship between the variables. This choice was grounded on the idea that the studied variables vary meaningfully within individuals' overtime. It was found that negative affect and burnout correlate positively with presenteeism losses while engagement's dimension of vigor plays an important role since it correlates negatively with presenteeism losses. Furthermore, unexpectedly results showed that family-to-work conflict correlates positively with presenteeism gains, which may explain that the relationship between presenteeism and other variables is not linear but variable.

Despite this, a first possible limitation of this investigation has to do with the fact that it has only been conducted for two working weeks, making it difficult to notice significant individual fluctuations. Additionally, another disadvantage may have been the small sample size.

Secondly, an instrument to measure presenteeism objectively is still lacking. Furthermore, another possible limitation is that all constructs were measured by means of self-report. A major limitation is the inherent problem of relying on individuals' ability to accurately determine their own productivity and other information as well.

In terms of future research about the topic, it would be helpful to develop an improved instrument to measure presenteeism accurately. Other studies should be performed regarding the perspective of presenteeism as an individual citizenship behavior and its positive impact

in the individuals, organizations and productivity as well. Additionally, further investigation is required about the relationship between presenteeism and engagement since vigor appears to play a significant role minimizing productivity losses due to presenteeism.

References

Adams, G. A. & Jex, S. M. (1999). Relationships between time management, control, work–family conflict, and strain. *Journal of Occupational Health Psychology, 4 (1),* 72-77.

Anderson, S. E., Coffey, B. S. & Byerly, R. T. (2002). Formal organizational initiatives and informal workplace practices: links to work-family conflict and job-related outcomes. *Journal of Management, 28,* 787-810.

Aronsson, G., Gustafsson, K. & Dallner, M. (2000). Sick but yet at work: an empirical study of sickness presenteeism. *Journal of Epidemiology and Community Health, 54,* 502-509.

Aronsson, G. & Gustafsson, K. (2005). Sickness presenteeism: Prevalence, attendance-pressure factors, an outline of a model for research. *Journal of Occupational and Environmental Medicine, 47,* 958-966.

Bacharach, S. B., Bamberger, P. & Conley, S. C. (1990). Work processes, role-conflict and role overload – the case of nurses and engineers in the public-sector. *Work and Occupations, 17(2),* 199-228.

Baker-McClearn, D., Greasley, K., Dale, J. & Griffith, F. (2010). Absence management and presenteeism: the pressures on employees to attend work and the impact of attendance on performance. *Human Resource Management Journal, 20, no 3,* 311-328.

Bakker, A. B. & Schaufeli, W. B. (2008). Positive organizational behavior: Engaged employees in flourishing organizations. *Journal of Organizational Behavior, 29,* 147-154.

Bakker, A. B., Schaufeli, W. B., Leiter, M. P. & Taris, T. W. (2008). Work engagement: An emerging concept in occupational health psychology. *Work & Stress, 22,* 187-200.

Bergström, G., Bodin, L., Hagberg, J., Lindh. T., Aronsson, G. & Josephson, M. (2009). Does sickness presenteeism have an impact on future general health? *International Archives of Occupational and Environmental Health, 82,* 1179-1190.

Bierla, I., Huver, B. & Richard, S. (2012). New evidence on absenteeism and presenteeism. *The International Journal of Human Resource Management,* 1-15.

Boles, M., Pelletier, B. & Lynch, W. (2004). The relationship between health risks and work productivity. *Journal of Occupational and Environment Medicine, 46,* 737-745.

Brown, S. & Sessions, J. G. (2004). Absenteeism, presenteeism, and shirking. *Economic Issues, 9 (1),* 15-21.

Bruck, C. S. & Allen, T. D. (2003). The relationship between big five personality traits, negative affectivity, type A behavior and work-family conflict. *Journal of Vocational Behavior, 71,* 265-281.

Burton, W. N., Pransky, G., Conti, D.J., Chen, C. Y. & Edington, D. W. (2004). The association of medical conditions and presenteeism. *Journal of Occupational Environment Medicine, 46 (6):* S38-45.

Cameron, K. S, Dutton, J. E. & Quinn, R. E. (2003). Foundations of positive organizational scholarship. In K.S. Cameron, J.E. Dutton & R.E. Quinn (Eds.), *Positive Organizational Scholarship: Foundations of a new discipline* (pp.3-13). San Francisco: Berret-Koehler.

Cancelliere, C., Cassidy, J. D., Ammendolia, C. & Côtê, P. (2011). Are workplace health promotion programs effective at improving presenteeism n workers? A systematic review and best evidence synthesis of the literature. *BMC Public Health,* 1-11.

Collins, J. J., Baase, C. M., Sharda, C. E., Ozminkowski, R. J., Nicholson, S., Billotti, G. M, Turpin, R. S., Olson, M. & Berger, M. L. (2005). The assessment of chronic health conditions on work performance, absence and total economic impact for employers. *Journal of Occupational and Environmental Medicine, 47,* 547-557.

Demerouti, E., Le Blanc, P. M. Bakker, A. B., Schaufelli, W. B., & Hox, J. (2009). Present but sick: a three-wave study on job demands, presenteeism and burnout. *Career Development International, 14,* 50-68.

Dew, K., Keefe, V., & Small, K. (2005). "Choosing" to work when sick: workplace presenteeism. *Social Science & Medicine, 60,* 2273-2282.

Erez, A. & A. M. Isen, A. M. (2002). The influence of positive affect on the components of expectancy motivation. *Journal of Applied Psychology, 87,* 1055–67.

Ferreira, A. I. & Martinez, L. F. (2012). Presenteeism and burnout among teachers in public and private Portuguese elementary schools. *The International Journal of Human Resource Management, 23,* 4380-4390.

Fleten, N. Johnsen, R. & Forde, O. H. (2004). Length of sick leave – why not ask the sick-listed? Sick-listed individuals predict their length of sick leave more accurately than professionals. *BMC Public Health, 4: 46,* 1-11.

Fritz, C. & Sonnentag, S. (2005). Recovery, health and job performance: effects of weekend experiences. *Journal of occupational Health Psychology, 10,* 187-199.

Frone, M. R. (2003). Work-family balance. In J.C. Quick & L.E. Tetrick (Eds.), *Handbook of Occupational Health Psychology* (143-162). Washington, DC: American Psychological Association.

Gilbreath, B. & Karimi, L. (2012). Supervisor behavior and employee presenteeism. *International Journal of Leadership Studies, 7,* 114-131.

Goetzel, R. Z., Long, S. R, Ozminkowski, R. J., Hawkins, K., Wang, S. & Lynch, W. (2004). Health, absence, disability and presenteeism costs estimates of certain physical and mental health conditions affecting U.S. employers. *Journal of Occupational and Environmental Medicine, 46, 4,* 398-411.

Gosselin, E. & Lauzier, M. (2011). Le présentéisme. *Revue Française de Gestion, 211/2012,* 15-26.

Greenhaus, J. H. & Beutell, N. (1985). Sources of conflict between work and family roles. *Academy of Management Review, 10,* 76-88.

Grinyer, A. & Singleton, V. (2000). Sickness absence as risk-taking behaviour: a study of organizational and cultural factors in the public sector. *Health, Risk & Society, 2,* 7-21.

Gutek, K. A., Searle, A. A., & Klepa, H. O. (1991). Work-family role conflict: evaluation study. *Journal of Social Work, 16 (3),* 88-96.

Hansen, C. D. & Andersen, J. D. (2008). Going ill to work – what personal circumstances, attitudes and work-related factors are associated with sickness presenteeism? *Social Science and Medicine, 67,* 956-964.

Heck, R. H., Thomas, S. L. & Tabata, L. N. (2010). *Multilevel and longitudinal modeling with IBM SPSS.* New York: Routledge.

Hemp, P. (2004). Presenteeism: at work – but out of it. *Harvard Business Review, 82,* 49-58.

Iida, M., Schrout, P. E., Laurenceau, J. P. & Bolger, N. (2012). Using diary methods in psychological research. In H. Cooper (Ed.). *APA Handbook of Research Methods in Psychology, 1* (277-305). Washington, DC: American Psychological Association.

Jex, S. M., & Spector, P. E. (1996). The impact of negative affectivity on stressor-strain relations: A replication and extension. *Work & Stress, 10,* 36–45.

Johns, G. (2010). Presenteeism in the workplace: A review and research agenda. *Journal of Organizational Behavior, 31,* 519-542.

Johns, G. (2011). Attendance dynamics at work: the antecedents and correlates of presenteeism, absenteeism, and productivity loss. *Journal of Occupational Health Psychology, 16, 4,* 483-500.

Judge, T. A. & Kammeyer-Mueller, J. D. (2008). Affect, satisfaction and performance. In N. M. Ashkanasy, N. M. & C. L. Cooper (Eds.). *Research Companion to Emotion in Organizations* (136-151). Massachusetts: Edward Elgar Publishing, Inc.

Kahn, J., Schneider, K. T., Jenkins-Henkelman, T. M. & Moybe, L. L. (2006). Emotional social support and job burnout among high school teachers: Is it all due to dispositional affectivity? *Journal of Organizational Behavior, 27,* 793-807.

Koopman, C., Pelletier, K. R., Murray, J. F., Sharda, C. E., Berger, M. L. Turpin, R. S., Hackelman, P., Gibson, P., Holmes, D. M. & Bendel, T. (2002). Stanford presenteeism scale: health status and employee productivity. *Journal of Occupational and Environmental Medicine, 44,* 14-20.

Krohne, K. & Brage., S. (2008). How GPs in Norway conceptualize functional ability: a focus group study. *British Journal of General Practice, 58,* 850-855.

Krohne, K. & Magnussen, L. H. (2011). Go to work or report sick? A focus group study on decisions of sickness presence among offshore caring section workers. *BMC Research Notes, 4,* 1-7.

Kinnunen, U., & Mauno, S. (1998). Antecedents and outcomes of work-family conflict among employed women and men in Finland. *Human Relations, 52,* 157- 177.

Kühnel, J., Sonnentag, S. & Bledow, R. (2012). Resources and time pressure as day-level antecedents of work engagement. *Journal of Occupational and Organizational Psychology, 85,* 181-198.

Lerner, D., Amicq, B. B., Rogers, W. H., Malspeis, S., Bungay, K. & Cynn, D. (2001). The work limitations questionnaire. *Medical Care*, 39, 72-85.

Loeppke, R., Hymel, P. A., Lofland, J. H., Pizzi, L. T., Konicki, D. L., Anstadt, G. W., Baase, C., Fortuna J. & Scharf, T. (2003). Health-related workplace productivity measurement: general and migraine specific recommendations from the ACOEM expert panel. *Journal of Occupational and Environmental Medicine, 45(4),* 249-359.

Lofland, J. H., Pizzi, L. & Frick, K. D. (2004). A review of health-related workplace productivity loss instruments. *Pharmacoeconomics, 22 (3),* 165-184.

Lowe, G. (2004). Here in body, absent on productivity – presenteeism hurts outputs, quality of work-life and employee health. *The National Journal of Human Resource Management,* 1-2.

Luthans, F. (2002). The need for and meaning of positive organizational behavior. *Journal of Organizational Behavior, 23,* 695-706.

Markussen, S., Mykletun, A, & Røed, K. (2010): The case for presenteeism. *IZA Discussion Paper // Forschungsinstitut zur Zukunft der Arbeit, N. 5343.*

Martinez, L. F., Ferreira, A. I., Sousa, L. M. & Cunha, J. V. (2007). A esperança é a última a morrer? Capital psicológico positivo e presentismo. *Comportamento Organizacional e Gestão, 13, 1,* 37-54.

Martinez, L. F., Ferreira, A. I., Sousa, L. M. & Cunha, J. V. (2010). Tradução e validação para a língua portuguesa das escalas de presentismo WLQ-8 e SPS-6. *Avaliação Psicológica, 9 (2),* 253-266.

Maroco, J. & Tecedeiro, M. (2009). Inventário de burnout de Maslach para estudantes portugueses. *Psicologia, Saúde e Doenças, 10 (2),* 227-235.

Maslach, C. & Jackson, S. (1986). *Maslach Burnout Inventory Manual.* Palo Alto, CA: Consulting Psychologists Press.

Maslach, C. & Leiter, M. P. (1997). *The truth about burnout: how organizations cause personal stress and what to do about it.* San Francisco, CA: Jossey-Bass.

Maslach, C. & Leiter, M. P. (2008). Early predictors of job burnout. *Journal of Applied Psychology, 93, 3,* 498–512.

Maslach, C., Schaufeli, W. B. & Leiter, M.P. (2001). Job burnout. *Annual Review of Psychology, 52,* 397-422.

Middaugh, D. J. (2007). Presenteeism: sick and tired at work. *Dermatology Nursing, 19,* 172-174.

Netemeyer, R. G., Boles, J. S., & McMurrian. (1996). Development and validation of work-family conflict and family-work conflict scales. *Journal of Applied Psychology, 81,* 400–410.

Nilsson, K., Hertting, A., Petterson, I. L., Theorell, T. (2005). Pride and confidence at work: potential predictors of occupational health in a hospital setting. *BMS Public Health, 5:* 92, 1-11.

O'Connor, B. P. (2000). SPSS and SAS programs for determining the number of components using parallel analysis and Velicer's MAP test. *Behavior Research Methods, Instrumentation, and Computers, 32,* 396-402.

Ohly, S., Sonnentag, S., Niessen, C. & Zapf, D. (2010). Diary studies in organizational research. An introduction and some practical implications. *Journal of Personnel Psychology, 9(2),* 79-93.

Organ, D. W. (1988). *Organizational citizenship behavior: the good soldier syndrome.* Lexington, MA, England: Lexington Books.

Organ, D. W., Podsakoff, P. M. & MacKenzie, S. P. (2006). *Organizational citizenship behavior: its nature, antecedents and consequences. London: Sage Publications*.

Ozminkowski, R. J., Goetzel, R. Z. & Long, S. R. (2003). A validity analysis of the work productivity short inventory (WPSI) instrument measuring employee health and productivity. *Journal of Occupational and Environmental Medicine, 45, 11,* 1183-1195.

Pasquali, L. (1999). Instrumentos psicológicos: manual prático de elaboração. Brasília: LabPAM/IBAPP.

Patel, C., Budhwar, P. & Varma, A. (2012). Overall justice, work group identification and work outcomes: Test of moderated mediation process. *Journal of World Business, 47,* 213-222.

Peterson, S. & Luthans, F. (2002). Does the manager's level of hope matters? Preliminary research evidence of a positive impact. P*roceedings of the Midwest Academy of Management.* Indianapolis, IN.

Podsakoff, N. P., Blume, B. D. Whiting, S. W. & Podsakoff, P. M. (2009). Individual and organizational-level consequences of organizational citizenship behaviors: A meta-analysis. *Journal of Applied Psychology, 94 (1),* 122-141.

Prasad, M., Wahlqvist, P., Shikiar, R. & Shih, Y. T. (2004). A review of self-report instruments measuring health-related work productivity. A patient-reported outcomes perspective. *Pharmacoeconomics, 22 (4),* 225-244.

Quick, J. C., Camara, W. J., Johnson, J. V., Sauter, S. L., Hurrell, J. J. Jr., Piotrkowski, C. S. & Spielberg, C. D. (1997). Creating healthier workplaces: The American Psychological Association/National Institute of Occupational Safety and Health cooperative agreement: Introduction and historical overview. *Journal of Occupational Health Psychology, 2,* 3-6.

Rantanen, I., Tuominen, R. (2011). Relative magnitude of presenteeism and absenteeism and work-related factors affecting them among health care professionals. *International Archives of Occupational and Environmental Health, 84,* 225-230.

Reilly, M. C., Zbrozek, A. S. & Dukes, E. M. (1993). The validity and reproducibility of a work and activity impairment instrument. *Pharmacoeconomics 4 (5),* 353-365.

Roe, R. (2003). Health and performance. In W. B. Schaufeli, A. B. Bakker & J. De Jonge (Eds), *De Psychologie van Arbeid en Gezondheid (Psychology of Work and Health) (* pp. 375-388). Houten: Bohn Stafleu van Loghum.

Rössler, W. (2012). Stress, burnout and job dissatisfaction in mental health workers. *European Archives of Psychiatric and Clinical Neuroscience, 262 (2),* 65-69.

Sandman, M. (2000). *Sickness absence and disability pensions: an inclusive working life.* Oslo: Statens forvaltningstjeneste.

Schaufeli, W. B. & Bakker, A. (2003). *Utrecht Work Engagement Scale (UWES).* Utrecht, The Netherlands: Department of Social and Organizational Psychology.

Schaufeli, W. & Bakker, A. (2004). Job demands, job resources, and their relationship with burnout and engagement: a multi-sample study. *Journal of Organizational Behavior*, 25, 293-315.

Schaufeli, W., Bakker, A. & Salanova, M. (2006). The measurement of work engagement with a short questionnaire – a cross-national study. *Educational an Psychological Measurement,* 701-416.

Schaufeli, W., Bakker, A., Van der Heijden, F., & Prins, J. (2009). Workaholism among medical residents: it is the combination of working excessively and compulsively that counts. *International Journal of Stress Management, 16,* 249-272.

Schaufeli, W., Leiter, M. P., Maslach, C. & Jackson, S. E. (1996). The Maslach Burnout Inventory-General Survey. In C. Maslach, S. E. Jackson & M. P. Leiter (Eds.), *Maslach Burnout Inventory. Manual (3rd ed).* Palo alto, CA: Consulting Psychologists Press.

Schaufeli, W. B., Salanova, M., González-Romá, V. & Bakker, A. B. (2002). The measurement of engagement and burnout: a confirmative analytic approach. *Journal of happiness Studies, 3,* 71-92.

Schaufeli, W. B., Bakker, A. B. & Van Rhenen, W. (2009). How changes in job demands and resources predict burnout, work engagement and sickness absenteeism. *Journal of Occupational Behavior, 30,* 893-917.

Seligman, M. E. P. & Csikszentmihalyi, M. (2000). Positive psychology: an introduction. *American Psychologist, 55(1*), 5-14.

Sheridan, A. (2004). Chronic presenteeism: the multiple dimensions to men's absence from part-time work. *Gender, Work and Organization, 11,* 207-224.

Simpson, R. (1998). Presenteeism, power and organizational change: Long hours as a career barrier and the impact on the working lives of women managers. *British Journal of Management, 9,* 37-50.

Sonnentag, S. (2003). Recovery, work engagement and proactive behavior: a new look at the interface between non-work and work. *Journal of Applied Psychology, 88,* 518-528.

Sonnentag, S. (2005). Burnout research: adding an off-work and day-level perspective. *Work and Stress, 19,* 271-275.

Sonnentag, S., Dormann, C. & Demerouti, E. (2010). Not all days are created equal: the concept of state work engagement. In A. B. Bakker & M. P. Leiter (Eds.), *Work Engagement: Recent developments in theory and research* (pp 25-38). New York: Psychology Press.

Stevens, M. (2004) Present dangers: presenteeism is the next area of focus as companies seek to maximize their investment in human capital by improving productivity and promoting employee health and wellness-disability. *Risk and Insurance,* 40-24.

Stone, A. A. & Gorin, A. A. (2007). Negative affect. *Encyclopedia of Stress (Second Edition),*822-825

Tecedeiro, M. (2005). *Factores psicológicos na síndrome de burnout: o narcisismo como variável preditora da síndrome.* Dissertação de Mestrado em Psicologia Clínica e Psicopatologia. Lisboa: ISPA.

Ten Brummelhuis, L. L., Bakker, A. B. & Euwema, M. C. (2010). Is family-to-work interference related to co-workers' work outcomes? *Journal of Vocational Behavior, 77*, 1-9.

Waddell, G., Aylward, M. & Sawney, P. (2002). *Back pain, incapacity for work and social security benefits: an international review and analysis*. London: Royal Society of Medicine Press

Waddell, G. & Burton, A.K. (2006). *Is work good for your health and well-being?* London: The Stationery Office.

Watson, D. (2000). *Mood and Temperament.* New York: Guilford.

Watson, D., & Clark, L. A. (1984). Negative affectivity: The disposition to experience negative aversive emotional states. *Psychological Bulletin, 96*, 465–490.

Watson, D., Clark, L. A., & Tellegan (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54(6),* 1063-1070.

Watson, D., Wiese, D., Vaidya, J. & Tellegen, A. (1999). The two general activation systems of affect: structural findings, evolutionary considerations and psychobiological evidence. *Journal of Personality and Social Psychology, 766,* 820-838.

Widera, E., Chang, A. & Chen, H. L. (2010). Presenteeism: a public health hazard. *Journal of General Internal Medicine, 25 (1),* 1244-1247.

Williams, S. & Shiaw, W. T. (1999). Mood and organizational citizenship behavior: the effects of positive affect on employee organizational citizenship behavior intentions. *The Journal of Psychology, 133 (6),* 656-668.

Xanthopoulou, D., Bakker, A. B., Heuven, E., Demerouti, E. & Schaufeli, W. B. (2008). Working in the sky: a diary study on work engagement among cabin attendants. *Journal of Occupational Health Psychology, 13*, 345-356.

Zaheer, S., Albert, S. & Zaheer, A. (1999). Time scales and organizational theory. *Academy of Management Review, 24,* 752-741.

Annex A

Este estudo serve para fins meramente académicos, no âmbito de um trabalho de investigação realizado no Mestrado em Psicologia Social e das Organizações do ISCTE-IUL.
Procura-se estudar o impacto de problemas de saúde no trabalho bem como as características e organização do trabalho. As respostas são anónimas e os dados serão tratados de uma forma totalmente confidencial. O seu preenchimento demora cerca de 10 minutos. Por favor, responda a todas as questões, pois só assim contribuirá para o sucesso desta investigação.

Parte I

1. **Sexo: Masculino/Feminino** (riscar o que não interessa)

2. **Idade _____ anos**

3. **Número de filhos: _____**
   a) com menos de 6 anos _____ b) com idade entre 6 e 12 anos _____

4. **Categoria profissional e função _____ Chefia? Sim/Não** (riscar o que não interessa)

5. **Anos de experiência profissional (total) _____**

6. **Antiguidade na empresa _____ anos/meses** (riscar o que não interessa)

7. **No último ano, quantas horas em média trabalhou por semana? _____ horas**

8. **Nos últimos 6 meses, quantos dias em média foi trabalhar, apesar de estar doente ou não se sentir bem? _____ dias**

9. **Diga o que pensa sobre o seu estado de saúde em geral, utilizando a seguinte escala:** (marque um círculo ou uma cruz à volta do número que corresponde à sua situação)

Mau	Razoável	Bom	Muito bom	Excelente
1	2	3	4	5

10. **Mencione um problema físico e outro psicológico que tenha afetado de alguma forma o seu desempenho no trabalho, durante os últimos 6 meses** (p.e., dor de cabeça, dor de costas, depressão, ansiedade, problemas de visão, problemas de respiração, asma, alergias...)

a) **Problema físico _____ Crónico? Sim/Não** (riscar o que não interessa)

b) **Problema psicológico _____ Crónico? Sim/Não** (riscar o que não interessa)

11. **Numa escala de 9 pontos, como considera que é a sua produtividade quando vai trabalhar tendo algum problema físico ou psicológico?**

Muitíssimo abaixo da da média	Muito abaixo da média	Abaixo da média	Um pouco abaixo da média	Normal	Um pouco acima da média	Acima da média	Muito acima da média	Muitíssimo acima da média
1	2	3	4	5	6	7	8	9

12. **Para cada uma das afirmações, coloque um círculo ou uma cruz para demonstrar o seu desacordo ou acordo face ao item que descreve as suas experiências de trabalho. Utilize a seguinte escala (1 a 5):**

Discordo totalmente 1	Discordo 2	Não concordo nem discordo 3	Concordo 4	Concordo totalmente 5

1. Se me ausentar do trabalho alguém poderá substituir-me	1	2	3	4	5
2. Se me ausentar do trabalho as tarefas acumulam-se até eu regressar	1	2	3	4	5
3. Vejo-me como alguém que é minucioso no seu trabalho	1	2	3	4	5
4. Vejo-me como alguém que é, por vezes, descuidado	1	2	3	4	5
5. Vejo-me como alguém que é um trabalhador de confiança	1	2	3	4	5
6. Vejo-me como alguém que tende a ser desorganizado	1	2	3	4	5

7. Vejo-me como alguém que tende a ser preguiçoso	1	2	3	4	5
8. Vejo-me como alguém que é eficiente nas tarefas que realiza	1	2	3	4	5
9. Vejo-me como alguém que faz planos e segue-os cuidadosamente	1	2	3	4	5
10. Vejo-me como alguém que se distrai com facilidade	1	2	3	4	5
11. As exigências da minha família interferem com as atividades relacionadas com o meu trabalho	1	2	3	4	5
12. Tenho de adiar coisas no trabalho devido às horas a que tenho de estar em casa	1	2	3	4	5
13. As coisas que quero fazer no trabalho não são feitas devido às exigências da minha família	1	2	3	4	5
14. A minha vida familiar interfere com as minhas responsabilidades no trabalho, como chegar ao trabalho a horas, realizar as tarefas diárias e trabalhar depois da hora de saída	1	2	3	4	5
15. As pressões relacionadas com a minha família interferem na minha capacidade de realizar deveres relacionados com o trabalho	1	2	3	4	5
16. As exigências do meu trabalho interferem com a minha vida familiar	1	2	3	4	5
17. Devido à quantidade de tempo que dedico ao trabalho tenho dificuldade em cumprir com as minhas responsabilidades familiares	1	2	3	4	5
18. Devido às exigências do meu trabalho, não consigo fazer as coisas que quero fazer em casa	1	2	3	4	5
19. As pressões geradas pelo meu trabalho tornam difícil fazer mudanças nos meus planos de atividades familiares	1	2	3	4	5
20. Devido às minhas responsabilidades relacionadas com o trabalho tenho de fazer mudanças nos meus planos de atividades familiares	1	2	3	4	5
21. Sou facilmente perturbado	1	2	3	4	5
22. Mudo frequentemente de estado de espírito	1	2	3	4	5
23. Irrito-me com facilidade	1	2	3	4	5
24. Fico nervoso facilmente	1	2	3	4	5
25. Fico chateado facilmente	1	2	3	4	5

26. Tenho alterações de humor com frequência	1	2	3	4	5
27. Sinto-me triste frequentemente	1	2	3	4	5
28. Preocupo-me com as coisas	1	2	3	4	5
29. Sou muito mais ansioso que a maior parte das pessoas	1	2	3	4	5
30. Considero que o meu nível de produtividade se mantém mesmo que vá trabalhar tendo algum problema físico ou psicológico	1	2	3	4	5
31. Ir trabalhar doente denota que estou comprometido com a minha empresa	1	2	3	4	5
32. Sinto-me bem em ir trabalhar doente pelo facto de estar disponível para ajudar os meus colegas e utentes/clientes	1	2	3	4	5
33. Ao ir trabalhar doente sinto que estou a contribuir para o desenvolvimento da empresa	1	2	3	4	5
34. A minha produtividade diminui significativamente em relação aos outros dias, quando vou trabalhar doente	1	2	3	4	5
35. Sinto que os meus colegas e utentes/clientes são afetados quando vou trabalhar doente	1	2	3	4	5
36. Considero que ir trabalhar doente agrava o meu problema de saúde e atrasa a minha recuperação	1	2	3	4	5
37. Sinto que não contribuo para o desenvolvimento da minha empresa quando vou trabalhar doente	1	2	3	4	5

Muito obrigada pela sua colaboração!

Parte II (do Dia 1 ao Dia 10)

1. **Diga o que pensa sobre o seu estado de saúde <u>hoje</u>, utilizando a seguinte escala:**
   (marque um círculo ou uma cruz à volta do número que corresponde à sua situação)

Mau	Razoável	Bom	Muito bom	Excelente
1	2	3	4	5

2. **Mencione um problema físico e outro psicológico que tenha afectado de alguma forma o seu desempenho no trabalho <u>durante o dia de hoje</u>** (p.e., dor de cabeça, dor de costas, depressão, ansiedade, problemas de visão, problemas de respiração, asma, alergias...)
   a) **Problema físico _____**
   b) **Problema psicológico _____**

3. **Para cada uma das afirmações, coloque um círculo ou uma cruz para demonstrar o seu desacordo ou acordo face ao item que descreve as suas experiências de trabalho no <u>presente dia</u>. Utilize a seguinte escala (1 a 5):**

Discordo totalmente	Discordo	Não concordo nem discordo	Concordo	Concordo totalmente
1	2	3	4	5

1. Devido ao meu problema de saúde, as dificuldades que normalmente fazem parte do meu trabalho foram mais complicadas de gerir	1	2	3	4	5
2. Apesar do meu problema de saúde consegui terminar as tarefas difíceis do meu trabalho	1	2	3	4	5
3. O meu problema de saúde inibiu-me de tirar prazer do trabalho	1	2	3	4	5
4. Senti-me desesperado na concretização de determinadas tarefas de trabalho devido ao meu problema de saúde	1	2	3	4	5
5. No trabalho, consegui concentrar-me na concretização dos meus	1	2	3	4	5

objectivos, apesar do meu problema de saúde					
6. Senti-me com energia sufiente para completar todo o meu trabalho, apesar do meu problema de saúde	1	2	3	4	5

4. Para cada uma das afirmações, coloque um círculo ou uma cruz para demonstrar o seu desacordo ou acordo face ao item que descreve as suas experiências de trabalho no <u>dia de hoje</u>. Utilize a seguinte escala (1 a 5):

Discordo totalmente	Discordo	Não concordo nem discordo	Concordo	Concordo totalmente
1	2	3	4	5

1. Considero que o meu nível de produtividade se manteve mesmo tendo ir trabalhar com algum problema físico ou psicológio	1	2	3	4	5
2. Ter ido trabalhar doente denotou que estou compometido com a minha empresa	1	2	3	4	5
3. Senti-me bem em ter ido trabalhar doente pelo facto de estar disponível para ajudar os meus colegas e utentes/clientes	1	2	3	4	5
4. O facto de ter ido trabalhar doente fez-me sentir que estou a contribuir para o desenvolvimento da minha empresa	1	2	3	4	5
5. A minha produtividade diminuiu significativamente em relação aos outros dias, por ter ido trabalhar doente	1	2	3	4	5
6. Senti que os meus colegas e utentes/clientes foram afetados por ter ido trabalhar doente	1	2	3	4	5
7. Considero que ter ido trabalhar doente agravou o meu problema de saúde e atrasou a minha recuperação	1	2	3	4	5
8. Senti que não contribuí para o desenvolvimento da minha empresa, por ter ido trabalhar doente	1	2	3	4	5

5. Para cada uma das palavras que se seguem, coloque um círculo ou uma cruz para demonstrar como se sente <u>hoje</u>. Utilize a seguinte escala (1 a 5):

Nada	Um pouco	Moderadamente	Muito	Extremamente
1	2	3	4	5

1. Angustiado	1	2	3	4	5
2. Chateado	1	2	3	4	5
3. Culpado	1	2	3	4	5
4. Assustado	1	2	3	4	5
5. Hostil	1	2	3	4	5
6. Irritável	1	2	3	4	5
7. Envergonhado	1	2	3	4	5
8. Nervoso	1	2	3	4	5
9. Agitado	1	2	3	4	5
10. Medroso	1	2	3	4	5

6. **Para cada uma das afirmações que se seguem coloque um círculo ou uma cruz para demonstrar como se sentiu <u>ao longo do dia de hoje</u> no trabalho. Utilize a seguinte escala (1 a 5):**

Nunca	Quase nunca	Raramente	Às vezes	Frequentemente	Muito frequentemente	Sempre
0	1	2	3	4	5	6

1. Senti-me cheio de energia no trabalho	0	1	2	3	4	5	6
2. Senti-me forte e vigoroso no trabalho	0	1	2	3	4	5	6
3. Senti-me entusiasmado com o meu trabalho	0	1	2	3	4	5	6

4. Senti que o meu trabalho me inspira	0	1	2	3	4	5	6
5. Quando acordei de amanhã, apeteceu-me vir trabalhar	0	1	2	3	4	5	6
6. Senti-me feliz quando trabalhei intensamente	0	1	2	3	4	5	6
7. Senti-me orgulhoso do trabalho que faço	0	1	2	3	4	5	6
8. Imergi no trabalho	0	1	2	3	4	5	6
9. Envolvi-me no trabalho	0	1	2	3	4	5	6
10. Senti-me emocionalmente esgotado devido ao trabalho	0	1	2	3	4	5	6
11. Senti-me esgotado no final do dia de trabalho	0	1	2	3	4	5	6
12. Senti-me cansado quando me levantei de manhã e pensei que tinha de enfrentar um dia de trabalho	0	1	2	3	4	5	6
13. Senti que trabalhar com utentes todos os dias é uma grande pressão para mim	0	1	2	3	4	5	6
14. Senti-me exausto devido ao trabalho	0	1	2	3	4	5	6

7. **Para cada uma das afirmações que se seguem coloque um círculo ou uma cruz para demonstrar como foi <u>hoje</u> o seu dia de trabalho. Utilize a seguinte escala (1 a 4):**

Totalmente falso	Falso	Verdadeiro	Totalmente verdadeiro
1	2	3	4

1. Não tive tempo para terminar as minhas tarefas	1	2	3	4
2. Andei sempre a "correr" para conseguir terminar as minhas tarefas	1	2	3	4
3. Tive muito tempo disponível	1	2	3	4

8. **Numa escala de 9 pontos, como considera que foi <u>hoje</u> a sua produtividade no trabalho?**

Muitíssimo abaixo da da média	Muito abaixo da média	Abaixo da média	Um pouco abaixo da média	Normal	Um pouco acima da média	Acima da média	Muito acima da média	Muitíssimo acima da média
1	2	3	4	5	6	7	8	9

9. **Devido ao meu problema de saúde, numa escala de 0 a 100, a minha produtividade <u>hoje</u> reduziu/manteve-se** (riscar o que não interessa) **cerca de _____%.**

10. **Considerando que apresenta um problema de saúde, físico ou psicológico, escreva sucintamente sobre o que o levou a ir trabalhar <u>hoje</u>:**

_____
_____
_____
_____
_____

Muito obrigada pela sua colaboração!

Part I - Questionnaire dimensions	**Items**
Sex	1
Age	2
Number of children • **With less than 6 years** • **Aged between 6 e and 12 years**	3 3 a) 3 b)
Professional category and function	4
Years of professional experience	5
Tenure in current organization	6
Weekly working hours	7
Days of presenteeism	8
General state of health	9
Health problems • **Physical (chronic or not)** • **Psychological (chronic or not)**	10 10 a) 10 b)
Productivity	11
Ease of replacement, Consciousness, Family-to-work-conflict, Work-to-family conflict, Neuroticism, Good apples and Bad apples • **Ease of replacement** • **Consciousness** • **Family-to-work conflict** • **Work-to-family conflict** • **Neuroticism** • **Good apples** • **Bad apples**	12 12 (1,2*) 12 (3, 4*, 5, 6*, 7*, 8 , 9, 10*) 12 (11, 12, 13, 14, 15) 12 (16, 17, 18, 19, 20) 12 (21, 22, 23, 24, 25, 26, 27, 28, 29) 12 (30,31,32,33) 12 (34,35,36,37)

Part II - Questionnaire dimensions	**Questionnaire items**
General state of health	1
Health problems • **Physical (chronic or not)** • **Psychological (chronic or not)**	2 2 a) 2 b)
Presenteeism (SPS-6) • **Avoiding distraction** • **Completing work**	3 3 (1, 3, 4) 3 (2*, 5*, 6*)
Good apples e bad apples • **Good apples** • **Bad apples**	4 4 (1,2,3,4) 4 (5,6,7,8)
Negative affect	5 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Engagement and burnout **Engagement** • **Vigor** • **Dedication** • **Absorption** **Burnout**	6 6 (1, 2, 3, 4, 5, 6, 7, 8, 9) 6 (1, 2, 5) 6 (3, 4, 7) 6 (6, 8, 9) 6 (10, 11, 12, 13, 14)
Work overload	7 (1, 2, 3*)
Productivity	8
Productivity loss due to presenteeism	9
Reason of engaging presenteeism	10

*reversed scored

Annex B

Mixed Model Analysis

Information Criteria[a]

-2 Restricted Log Likelihood	818.406
Akaike's Information Criterion (AIC)	824.406
Hurvich and Tsai's Criterion (AICC)	824.467
Bozdogan's Criterion (CAIC)	839.350
Schwarz's Bayesian Criterion (BIC)	836.350

The information criteria are displayed in smaller-is-better forms.

a. Dependent Variable: SPS6T1.

Fixed Effects

Estimates of Fixed Effects[a]

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Intercept	2.505640	.075169	41.092	33.334	.000	2.353844	2.657436

a. Dependent Variable: SPS6T1.

Covariance Parameters

Estimates of Covariance Parameters[a]

Parameter		Estimate	Std. Error	Wald Z	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Repeated Measures	AR1 diagonal	.411984	.034218	12.040	.000	.350092	.484818
	AR1 rho	.202536	.059174	3.423	.001	.084237	.315205
Intercept [subject = Id]	Variance	.174312	.052852	3.298	.001	.096214	.315803

a. Dependent Variable: SPS6T1.

Mixed Model Analysis

Information Criteria[a]

-2 Restricted Log Likelihood	820.193
Akaike's Information Criterion (AIC)	826.193
Hurvich and Tsai's Criterion (AICC)	826.255
Bozdogan's Criterion (CAIC)	841.130
Schwarz's Bayesian Criterion (BIC)	838.130

The information criteria are displayed in smaller-is-better forms.

a. Dependent Variable: SPS6T1.

Fixed Effects

Estimates of Fixed Effects[a]

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Intercept	2.504908	.075603	40.117	33.132	.000	2.352122	2.657694
Conf_Fam_TrabCent	.092018	.124263	40.105	.741	.463	-.159107	.343142

a. Dependent Variable: SPS6T1.

Covariance Parameters

Estimates of Covariance Parameters[a]

Parameter		Estimate	Std. Error	Wald Z	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Repeated Measures	AR1 diagonal	.412196	.034279	12.025	.000	.350200	.485168
	AR1 rho	.203419	.059236	3.434	.001	.084979	.316192
Intercept [subject = Id]	Variance	.176892	.054112	3.269	.001	.097123	.322178

a. Dependent Variable: SPS6T1.

Mixed Model Analysis

Information Criteria[a]

-2 Restricted Log Likelihood	691.805
Akaike's Information Criterion (AIC)	697.805
Hurvich and Tsai's Criterion (AICC)	697.869
Bozdogan's Criterion (CAIC)	712.610
Schwarz's Bayesian Criterion (BIC)	709.610

The information criteria are displayed in smaller-is-better forms.

a. Dependent Variable: SPS6T1.

Fixed Effects

Estimates of Fixed Effects[a]

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Intercept	2.507314	.055778	38.415	44.952	.000	2.394437	2.620190
Conf_Fam_TrabCent	.001635	.091862	39.726	.018	.986	-.184065	.187336
AfetoNegCent	.398539	.084253	333.514	4.730	.000	.232804	.564274
BurnoutCent	.264347	.035077	192.536	7.536	.000	.195162	.333533

a. Dependent Variable: SPS6T1.

Covariance Parameters

Estimates of Covariance Parameters[a]

Parameter		Estimate	Std. Error	Wald Z	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Repeated Measures	AR1 diagonal	.336941	.029941	11.253	.000	.283084	.401046
	AR1 rho	.249966	.061934	4.036	.000	.125237	.366917
Intercept [subject = Id]	Variance	.071151	.030442	2.337	.019	.030761	.164575

a. Dependent Variable: SPS6T1.

Mixed Model Analysis

Information Criteria[a]

-2 Restricted Log Likelihood	642.202
Akaike's Information Criterion (AIC)	648.202
Hurvich and Tsai's Criterion (AICC)	648.267
Bozdogan's Criterion (CAIC)	662.983
Schwarz's Bayesian Criterion (BIC)	659.983

The information criteria are displayed in smaller-is-better forms.

a. Dependent Variable: SPS6T1.

Fixed Effects

Estimates of Fixed Effects[a]

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Intercept	2.489112	.056724	36.643	43.881	.000	2.374139	2.604084
Conf_Fam_TrabCent	.031823	.093694	38.278	.340	.736	-.157806	.221452
AfetoNegCent	.342236	.079095	351.746	4.327	.000	.186678	.497795
BurnoutCent	.106989	.038199	227.174	2.801	.006	.031718	.182259
VigorCent	-.244600	.044344	366.958	-5.516	.000	-.331800	-.157401
DedicaçãoCent	-.042132	.032485	349.780	-1.297	.195	-.106023	.021759
AlheamentoCent	-.041040	.050042	366.655	-.820	.413	-.139445	.057366

a. Dependent Variable: SPS6T1.

Covariance Parameters

Estimates of Covariance Parameters[a]

Parameter		Estimate	Std. Error	Wald Z	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Repeated Measures	AR1 diagonal	.266255	.022523	11.822	.000	.225576	.314268
	AR1 rho	.164893	.064569	2.554	.011	.036306	.288109
Intercept [subject = Id]	Variance	.092845	.031417	2.955	.003	.047834	.180213

a. Dependent Variable: SPS6T1.

Mixed Model Analysis

Information Criteria[a]

-2 Restricted Log Likelihood	701.368
Akaike's Information Criterion (AIC)	707.368
Hurvich and Tsai's Criterion (AICC)	707.430
Bozdogan's Criterion (CAIC)	722.290
Schwarz's Bayesian Criterion (BIC)	719.290

The information criteria are displayed in smaller-is-better forms.

a. Dependent Variable: BadApplesT1.

Fixed Effects

Estimates of Fixed Effects[a]

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Intercept	2.297950	.083538	41.547	27.508	.000	2.129310	2.466590

a. Dependent Variable: BadApplesT1.

Covariance Parameters

Estimates of Covariance Parameters[a]

Parameter		Estimate	Std. Error	Wald Z	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Repeated Measures	AR1 diagonal	.309474	.028276	10.945	.000	.258732	.370167
	AR1 rho	.279595	.065209	4.288	.000	.147512	.401879
Intercept [subject = Id]	Variance	.238443	.064884	3.675	.000	.139881	.406453

a. Dependent Variable: BadApplesT1.

Mixed Model Analysis

Information Criteria[a]

-2 Restricted Log Likelihood	702.353
Akaike's Information Criterion (AIC)	708.353
Hurvich and Tsai's Criterion (AICC)	708.414
Bozdogan's Criterion (CAIC)	723.266
Schwarz's Bayesian Criterion (BIC)	720.266

The information criteria are displayed in smaller-is-better forms.

a. Dependent Variable: BadApplesT1.

Fixed Effects

Estimates of Fixed Effects[a]

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Intercept	2.297006	.083395	40.560	27.544	.000	2.128531	2.465481
Conf_Fam_TrabCent	.147185	.137237	40.742	1.072	.290	-.130024	.424395

a. Dependent Variable: BadApplesT1.

Covariance Parameters

Estimates of Covariance Parameters[a]

Parameter		Estimate	Std. Error	Wald Z	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Repeated Measures	AR1 diagonal	.309322	.028231	10.957	.000	.258657	.369912
	AR1 rho	.278996	.065176	4.281	.000	.146994	.401234
Intercept [subject = Id]	Variance	.237493	.065410	3.631	.000	.138425	.407462

a. Dependent Variable: BadApplesT1.

Mixed Model Analysis

Information Criteria[a]

-2 Restricted Log Likelihood	622.724
Akaike's Information Criterion (AIC)	628.724
Hurvich and Tsai's Criterion (AICC)	628.788
Bozdogan's Criterion (CAIC)	643.520
Schwarz's Bayesian Criterion (BIC)	640.520

The information criteria are displayed in smaller-is-better forms.

a. Dependent Variable: BadApplesT1.

Fixed Effects

Estimates of Fixed Effects[a]

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Intercept	2.308656	.077251	39.061	29.885	.000	2.152409	2.464903
Conf_Fam_TrabCent	.061488	.126719	39.891	.485	.630	-.194642	.317618
AfetoNegCent	.220878	.078747	373.166	2.805	.005	.066034	.375723
BurnoutCent	.196719	.035198	332.353	5.589	.000	.127480	.265958

a. Dependent Variable: BadApplesT1.

Covariance Parameters

Estimates of Covariance Parameters[a]

Parameter		Estimate	Std. Error	Wald Z	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Repeated Measures	AR1 diagonal	.255274	.022976	11.111	.000	.213991	.304522
	AR1 rho	.243323	.066658	3.650	.000	.108999	.368920
Intercept [subject = Id]	Variance	.201569	.055725	3.617	.000	.117248	.346532

a. Dependent Variable: BadApplesT1.

Mixed Model Analysis

Information Criteria[a]

-2 Restricted Log Likelihood	595.904
Akaike's Information Criterion (AIC)	601.904
Hurvich and Tsai's Criterion (AICC)	601.968
Bozdogan's Criterion (CAIC)	616.676
Schwarz's Bayesian Criterion (BIC)	613.676

The information criteria are displayed in smaller-is-better forms.

a. Dependent Variable: BadApplesT1.

Fixed Effects

Estimates of Fixed Effects[a]

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Intercept	2.296603	.080629	38.176	28.484	.000	2.133404	2.459803
Conf_Fam_TrabCent	.085713	.132450	39.212	.647	.521	-.182147	.353573
AfetoNegCent	.189677	.074986	364.631	2.529	.012	.042218	.337137
BurnoutCent	.066094	.038933	353.628	1.698	.090	-.010476	.142664
VigorCent	-.185323	.042171	361.185	-4.395	.000	-.268255	-.102390
DedicaçãoCent	-.034160	.029305	307.439	-1.166	.245	-.091823	.023504
AlheamentoCent	-.040391	.047066	361.360	-.858	.391	-.132949	.052167

a. Dependent Variable: BadApplesT1.

Covariance Parameters

Estimates of Covariance Parameters[a]

Parameter		Estimate	Std. Error	Wald Z	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Repeated Measures	AR1 diagonal	.230235	.021330	10.794	.000	.192005	.276077
	AR1 rho	.270021	.067798	3.983	.000	.132765	.397116
Intercept [subject = Id]	Variance	.225716	.061142	3.692	.000	.132735	.383829

a. Dependent Variable: BadApplesT1.

Mixed Model Analysis

Information Criteria[a]

-2 Restricted Log Likelihood	644.103
Akaike's Information Criterion (AIC)	650.103
Hurvich and Tsai's Criterion (AICC)	650.165
Bozdogan's Criterion (CAIC)	665.024
Schwarz's Bayesian Criterion (BIC)	662.024

The information criteria are displayed in smaller-is-better forms.

a. Dependent Variable: GoodApplesT1.

Fixed Effects

Estimates of Fixed Effects[a]

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Intercept	3.404672	.098509	40.350	34.562	.000	3.205632	3.603712

a. Dependent Variable: GoodApplesT1.

Covariance Parameters

Estimates of Covariance Parameters[a]

Parameter		Estimate	Std. Error	Wald Z	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Repeated Measures	AR1 diagonal	.223984	.017377	12.890	.000	.192389	.260768
	AR1 rho	.049675	.061605	.806	.420	-.071206	.169118
Intercept [subject = Id]	Variance	.379854	.090738	4.186	.000	.237840	.606665

a. Dependent Variable: GoodApplesT1.

Mixed Model Analysis

Information Criteria[a]

-2 Restricted Log Likelihood	640.914
Akaike's Information Criterion (AIC)	646.914
Hurvich and Tsai's Criterion (AICC)	646.976
Bozdogan's Criterion (CAIC)	661.828
Schwarz's Bayesian Criterion (BIC)	658.828

The information criteria are displayed in smaller-is-better forms.

a. Dependent Variable: GoodApplesT1.

Fixed Effects

Estimates of Fixed Effects[a]

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Intercept	3.403311	.093795	39.469	36.284	.000	3.213664	3.592958
Conf_Fam_TrabCent	.354637	.154175	39.454	2.300	.027	.042904	.666370

a. Dependent Variable: GoodApplesT1.

Covariance Parameters

Estimates of Covariance Parameters[a]

Parameter		Estimate	Std. Error	Wald Z	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Repeated Measures	AR1 diagonal	.223863	.017350	12.903	.000	.192314	.260587
	AR1 rho	.048512	.061524	.789	.430	-.072193	.167816
Intercept [subject = Id]	Variance	.341856	.083160	4.111	.000	.212217	.550688

a. Dependent Variable: GoodApplesT1.

Mixed Model Analysis

Information Criteria[a]

-2 Restricted Log Likelihood	607.604
Akaike's Information Criterion (AIC)	613.604
Hurvich and Tsai's Criterion (AICC)	613.669
Bozdogan's Criterion (CAIC)	628.401
Schwarz's Bayesian Criterion (BIC)	625.401

The information criteria are displayed in smaller-is-better forms.

a. Dependent Variable: GoodApplesT1.

Fixed Effects

Estimates of Fixed Effects[a]

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Intercept	3.423970	.094937	38.171	36.066	.000	3.231808	3.616132
Conf_Fam_TrabCent	.335700	.155266	38.560	2.162	.037	.021529	.649871
AfetoNegCent	.083031	.076189	365.097	1.090	.277	-.066794	.232855
BurnoutCent	-.035942	.035259	368.261	-1.019	.309	-.105276	.033391

a. Dependent Variable: GoodApplesT1.

Covariance Parameters

Estimates of Covariance Parameters[a]

Parameter		Estimate	Std. Error	Wald Z	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Repeated Measures	AR1 diagonal	.213274	.017150	12.436	.000	.182177	.249680
	AR1 rho	.072381	.071839	1.008	.314	-.068927	.210842
Intercept [subject = Id]	Variance	.341649	.084436	4.046	.000	.210480	.554560

a. Dependent Variable: GoodApplesT1.

Mixed Model Analysis

Information Criteria[a]

-2 Restricted Log Likelihood	614.808
Akaike's Information Criterion (AIC)	620.808
Hurvich and Tsai's Criterion (AICC)	620.873
Bozdogan's Criterion (CAIC)	635.581
Schwarz's Bayesian Criterion (BIC)	632.581

The information criteria are displayed in smaller-is-better forms.

a. Dependent Variable: GoodApplesT1.

Fixed Effects

Estimates of Fixed Effects[a]

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Intercept	3.427659	.095460	37.968	35.907	.000	3.234405	3.620912
Conf_Fam_TrabCent	.338645	.156338	38.557	2.166	.037	.022306	.654984
AfetoNegCent	.099489	.076159	362.958	1.306	.192	-.050278	.249257
BurnoutCent	.002069	.039897	361.681	.052	.959	-.076390	.080527
VigorCent	.022125	.041281	324.331	.536	.592	-.059087	.103337
DedicaçãoCent	.015118	.030552	340.668	.495	.621	-.044977	.075214
AlheamentoCent	.077048	.047834	362.589	1.611	.108	-.017019	.171114

a. Dependent Variable: GoodApplesT1.

Covariance Parameters

Estimates of Covariance Parameters[a]

Parameter		Estimate	Std. Error	Wald Z	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Repeated Measures	AR1 diagonal	.211115	.017168	12.297	.000	.180010	.247594
	AR1 rho	.082097	.073344	1.119	.263	-.062364	.223189
Intercept [subject = Id]	Variance	.345435	.085606	4.035	.000	.212531	.561450

a. Dependent Variable: GoodApplesT1.