

Health and Well-being at Work: The Hospital Context

Abstract

Introduction

Numerous studies have shown how psychosocial risks and well-being at work have effected both the physical and mental health of workers in the medical field and more specifically hospital workers.

Objective

In this study, our primary goal is to measure the magnitude of the six key factors of the psychosocial work environment in French hospitals. Our second goal is to highlight the most important of those key factors for the hospital employees in order to eventually propose specific ways of improving their well-being at work and preventing social risks.

Method

Our sample was composed of 1,139 hospital workers. (1) A 24-item scale was created, based on the six key factors identified by the DARES study. This scale allowed us to measure the degree of the psychosocial risk and of the well-being at work. (2) Social Representations were measured by a free association task based on the target expression: *well-being at work in the hospital*. (3) Participants also answered an open-ended question, on how to improve well-being at work in the hospital; answers were analyzed by a hierarchical classification.

Results

Four of the six key factors extracted from the factorial analysis are equal to those identified by the DARES' report: Work Demands, Emotional Demands, Work Relationships and Job Security. Quantitative analyses show that, for hospital workers, the level of risk is the highest on the first two. The social representation of *well-being at work in the hospital*, and the discourse analysis indicate that the most important key factor for hospital employees is Relationships at work.

Conclusion

In this study, the use of both quantitative and qualitative assessments enables us to analyze the quality of working conditions in the hospital. Overall, taking into account the employees' psychosocial risks and well-being at work can have a positive impact on both their physical and mental health.

Santé et bien-être au travail : le contexte hospitalier

Résumé

Introduction

Plusieurs études ont montré l'importance des risques psychosociaux et du bien-être au travail, sur la santé physique et mentale dans le secteur médical et en particulier des agents du secteur hospitalier.

Objectif

L'objectif principal de notre étude est de mesurer l'ampleur des six dimensions de l'environnement de travail psychosocial dans un hôpital français. Le deuxième objectif est de mettre en évidence lesquelles de ces six dimensions sont les plus prégnantes pour le personnel hospitalier afin de proposer des actions spécifiques d'amélioration du bien-être au travail et de prévention des risques psychosociaux.

Méthode

La population est composée de 1139 salariés. (1) Le niveau de RPS et de bien-être a été mesuré à partir d'une échelle de 24 items fondée sur les six dimensions de la DARES. (2) La représentation sociale du *bien-être au travail à l'hôpital* a été étudiée à partir d'un questionnaire d'associations libres. (3) Les propositions d'amélioration des conditions de travail en vue d'augmenter le bien-être à l'hôpital ont été analysées à l'aide d'une analyse de contenu en classification hiérarchique.

Résultats

Parmi les six dimensions extraites par l'analyse factorielle en composantes principales, quatre sont identiques à celles mises en évidence par la DARES : l'exigence liée au travail, l'exigence émotionnelle, les rapports sociaux au travail et l'insécurité au travail. Les analyses quantitatives indiquent que les deux premières s'avèrent être celles avec le niveau de risque le plus élevé pour la population des agents hospitaliers et les analyses qualitatives mettent en évidence que, pour le personnel hospitalier, la dimension la plus importante est les rapports sociaux au travail.

Conclusion

L'utilisation de deux évaluations quantitatives et qualitatives permet d'analyser la qualité des conditions de travail à l'hôpital. Plus globalement, la prise en compte conjointe des risques psychosociaux et du bien-être au travail constitue une contribution à la protection de la santé physique et mentale des salariés.

Mots clefs : Bien-être au travail ; Santé, Risques psychosociaux ; Représentation Sociale ; Hôpital

Key words: Well-being at work; Health; Psychosocial Risks; Social Representation; Hospital

1. Introduction

1.1. From Health and Well-being to Psychosocial Risks in the Work-place

According to the World Health Organization, health can be defined as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (1946, p. 1). Therefore, if this definition is applied to the work place, it implies that health at work does not only concern the physical and mental integrity of workers, but should also aim at promoting well-being at work.

Work “is never neutral vis-à-vis health” (Molinier, 2009, p. 43). One spends more than a third of one’s time at work. According to many authors (e.g. Jahoda, 1982; Warr, 2008), work represents much more than merely a source of income. Work can be a source of well-being and have positive effects on people’s health, but it can also have adverse effects. For example, studies have shown that the absence of work and, more specifically, unemployment, has a negative impact on the health of individuals (McKee-Ryan, Song, Wanberg & Kinicki, 2005; Murphy & Athanasou, 1999; Paul & Moser, 2009; Winifield et al., 1990).

In recent years, because of the many structural changes and their impact on the occupational health of workers, and particularly their occupational mental health, a new concept has emerged in France, i.e. psychosocial risks. The French Ministry of Work and Employment (2013) describes psychosocial risks as encompassing “risks to health, mental as well as physical, created by work through social and psychological mechanisms”. According to Nasse and Légeron, “there is no consensus about the identification of causes of psychosocial risks, the extent of their occurrence, and, a fortiori, on the meaning of actions that could prevent, cure or repair them” (2008, p. 5). Moreover, and as highlighted in Nasse and Légeron’s report (2008), the concept of psychosocial risk remains poorly defined because “the wide variety of themes developed in [this] word [...] is a source of confusion. These themes include [...] the determinants and effects, without distinguishing between causes and consequences. This confusion stems not only from the diversity of risks, but also from the complexity of the links between them” (2008, p. 6).

For us, and in agreement with Montreuil (2011), it seems necessary to distinguish between the concept of “risk”, i.e. the probability of being confronted by risk, thus creating “risk factors”, and consequences of risk exposure. These consequences mainly occur when there is an imbalance in the system consisting of the individual and the environment. Due to this

imbalance, psychosocial risks have significant consequences both for the individuals at work, causing various diseases and disorders which may be irreversible (Combalbert, 2010), and for the organization as a whole. In fact, psychosocial risks often have a collective effect and usually deteriorate the overall social climate of the work place (Courcy, Savoie, Harvey, & Brunet, 2006) ; the organization then needs to fight against a potential increase in absenteeism, a high risk of accidents and a greater turnover. In Europe, according to the European Agency for Safety and Health at Work, the cost of occupational stress was € 20 billion in 2002. In 2007, in France, INRS estimated that the costs of stress, is between 2 and 3 billion euros (Trontin, Lassagne, Boini, & Rinal, 2010).

Well-being and Health at work have become a major concern in our society and a priority in public health; and this priority includes the diagnosis of psychosocial risks at work.

1.2. Psychosocial Risk factors

In France, Nasse and Légeron carried out a study, in 2008, on how to diagnose psychosocial risks at work. They then suggested the creation of a Follow up Group to work further on this topic. Gollac (Gollac & Bodier, 2011), who chaired this Follow up Group, started by identifying various risk factors studied in the literature. These risk factors were tested by the DARES¹ (*Direction de l'Animation de la Recherche, des Etudes et des Statistiques*). According to the DARES report (2010), the main risk factors can be grouped into the following six factors.

a) The first one, “Work Demands”, is high when the psychological demand is too strong in the workplace (Karasek, 1979; Siegrist, 1996); it can therefore create adverse effects on health. The determinants of the psychological demand refer firstly to the duration and organization of the working-time (number of hours and days worked; night work and shift work schedules impeding social life, etc.). Secondly, the psychological demand is based on both the intensity and the complexity of the work to be accomplished, i.e. unclear objectives, requirements versatility, conflicting instructions, etc.

b) The degree of psychological demands can be used to measure the cost of work related “Emotional Demands” on health. This implies the degree to which one needs to control and shape ones’ own emotions, as well as the emotions of others. Emotional Demands pertain to the subjective emotional involvement required to perform a job and its impact on the individual’s emotional stability. The mobilization of too many strong emotions, or the development of artificial emotions involving the feeling of not being someone authentic, can

¹ DARES is a Research structure which is part of the French Ministry of Work and Employment.

lead to emotional exhaustion. This factor has to do with having control of one's emotions, to control those people with whom one works. As it is often the case with jobs in which there is public contact (students, patients, clients, etc.), Emotional Demands can be extremely high. This is particularly true of jobs involving an interaction with the public, such as hospital workers dealing with patients and their families.

c) The third key factor is "Autonomy and Decision Latitude". According to Karasek's definition (1979), decision latitude includes autonomy in decision-making and the ability to use one's skills. Autonomy in decision-making is related to the available flexibility for an individual to organize his or her workload. It also relates to the amount of possible participation in the decision-making process itself. A second type of autonomy pertains to the capacity of individuals to learn and to develop new skills in the work place.

d) "Work Relationships" is a factor which is divided into four key concepts that measure various aspects of social relationships: (i) social support from colleagues and from a worker's superiors (Karasek & Theorell, 1990); (ii) workplace violence (criticism, denial of quality, insults, moral harassment and/or sexual harassment, discrimination, etc.); (iii) recognition of efforts (feelings of worthlessness, lack of appreciation, etc.); and (vi) the lack of clarity of instructions (unclear instructions, conflicting orders, etc.). This dimension is linked to the concepts of cooperation, integration, organizational justice and recognition (e.g., Adams, 1963; Cohen-Charash & Spector, 2001). The most abstract relationships with the company, i.e. salary or career prospects, are also to be taken into account here.

e) The "Value Conflicts" factor measures what is also known as ethical suffering: one can feel strained when the work being asked is not in accordance with one's social values or work values. This may be due to the nature of the task involved or to the lack of time to complete the task or to the lack of resources available for this task. This dimension primarily refers to value conflicts, that is to say, situations in which a person has to behave against his/her social, personal or professional values.

f) The last of the six key factors is defined in the DARES report (2010) as "Employment Insecurity/Job Security", which is "the helplessness one feels when attempting to maintain one's desired position when it is threatened by unemployment." Research has shown the place of work insecurity among the main stressors having a negative impact on health (Burchell, 2002; Hartley, Jacobsen, Klandermans & van Vuuren, 1991; Roskies & Louis-Guerin, 1990). This dimension takes into account the fear of job loss, the degradation of its nature and the insecurity related to uncertainty and unknown situations in the work place. Insecurity of the

work situation includes socio-economic insecurity, as well as the risk of uncontrolled tasks and the change of working conditions.

Among the risk factors, other factors also need to be considered, such as gender, age, social background, level of education, and items related to occupational status. Professional trajectory should also be taken into account in evaluating the level of social risk in the work place.

1.3. Psychosocial Risks in the medical field

Studies have shown how psychosocial risks and well-being at work have affected both the physical and mental health of workers in the medical field and more specifically hospital workers (Eriksen et al., 2004 a & b; Jhun et al., 2004; Violante et al., 2004; Yip, 2001), including burnout among nurses (Li et al. 2013). The DARES' results indicate that occupations involving healthcare are particularly affected by psychosocial risks, especially in terms of two specific key factors: Emotional Demands (cf. Conditions de Travail, 2005; Santé et Itinéraire Professionnel, 2007, analyzed in the DARES' report, 2010), and Social Relationships (Sumer, 2003, analyzed by Hamon-Cholet, & Waltisperger, 2004). Emotional Demands are particularly high in this field which involves the support of people suffering physically and/or mentally, and people with limited autonomy. These types of relationships require self-control and are emotionally demanding. This is particularly true in situations of conflict, in which professionals can face the violence of the beneficiaries, as well as of other professionals. Work schedule, with its frequent schedule changes, working at night, or on Sundays and during holidays, can affect one's health down the road, especially because of the disruption of biological rhythms, family rhythms and overall social rhythms.

During the past few years, numerous restructuring changes have occurred in the French medical field, with new management systems and the introduction of market principles (Detchessahar & Grevin, 2009); their evolution has become comparable to those of companies from the competitive sector (Brizard, Hanicotte, & Paradis, 2012). In most French hospital, change is constant (hosted populations, reorganizations, mergers, etc.), and the hospital staff has had to face a significant transformation, not only as far as the content of their work, but also in the entire coordination of the organization. Numerous studies have shown that psychosocial risks, specially due to violence, occur more frequently when the employees are subject to many changes in their working environment (e.g. Baillien & De Witte, 2009; Bryant & Cox, 2003; Skogstad, Matthiesen, & Einarsen, 2007; Zid & Jeoffrion, 2014).

In this context, the representations that hospital employees share about “well-being at work” can constitute a means of identifying organizational risks and a means of preventing psychological health and well-being.

1.4. Health care workers’ Social Representations of well-being at work in the hospital

In the Social Representation Theory, developed by Moscovici (1961), a social representation is a psychological organization, based on images, concepts and meanings related to a given social object. This creates a specific “knowledge” which is built as a combined reflection of both individual and social reality. The social representation is determined by the structure of the social group in which it develops; therefore, it is a form of knowledge which is socially shaped and shared by the members of a given social group.

Several theoretical extensions have been elaborated and particularly the structural approach and the central core theory (cf. Abric, 1984; Flament, 1981). These approaches sustain the arguments of the hierarchical organization of a social representation with a central core surrounded by peripheral zones (cf. Abric, 1994). The central core is the fundamental part of the representation, which determines both the significance and the organization of the representation. It is common and shared by the majority of the members of a given group. The central core is surrounded by peripheral elements that play an important role in the protection of the central core, as well as in the fulfillment of the significance of the representation. The peripheral elements are organized in three specific peripheral zones, which provide space for the individualization of the social knowledge.

A technique often used to make a preliminary identification of the elements of the core and the peripheral system is the so-called “free association” task. Using this technique with a recurring target word allows us to compare results from different groups or even from different studies at different periods of time and/or in different contexts.

Other approaches, such as Jodelet’s (1989) anthropological approach, gives space to a fuller discourse than just word or phrase’s associations, via interviews or open-ended questions in questionnaires. This technique does not allow us to access the organization of the social representation, but allows us to access a more complex level of thinking. It is often paired with a free association task.

Numerous studies have shown the link between social representations, practice and change (Abric, 1994; Roland-Lévy, 2002), and that is what interests us: to highlight the social representations of the workers will allow us to understand what they think about their work and

how they experience their work in general. It is therefore a step towards identifying levers and barriers of well-being at work.

Although several studies have been made on the social representation of work, most of them focus on the relationship between work and feelings of dissatisfaction and frustration. No studies connecting work with well-being using the social representation methods could be found. Most of the available studies deal with social representation of work and unemployment (e.g. Márquez, 2005; Methivier, 2010, 2012; Milland, 2002). According to Salmaso and Pombeni (1986), the central cognition about work mainly deals with the fact that it “enables people to make a living”, but it “absorbs a lot of time”, “requires much attention”, and “requires effort and energy”. Moreover, for Flament (1994), it refers to “personal accomplishment” and “to allowing to finance leisure activities”. Through a generational analysis, Flament (1996) also showed that people over fifty value work because it is a factor of social integration, while the younger generation values work as a way to finance their free time.

Recent studies show that, even if people have a tendency to work more and more, they don't want to be overwhelmed by their job (Negura, 2008). Work can be considered a source of personal fulfillment, not simply a source of income (Negura, 2006; Negura & St-Amand, 2008). According to Baggio and Sutter (2013), the current trend shows a greater concern for work perceived as “interesting” by employees. Studies also show the importance of context which can degrade or improve work quality (Louche & Moliner, 2001).

1.5. Objectives

The main goal of our study is to measure the magnitude of the six key factors of the psychosocial work environment in a hospital located in Eastern France. The second goal is to highlight from the six key factors the most important ones for hospital personnel. The third goal is to identify among the different socio-demographic variables those that have an effect on the level of psychosocial risk. Based on these, the final goal is to focus on well-being at work and to see how it could be improved in the hospital sector from the study of representations.

2. Research Method

2.1. Participants

Out of a total of 5,495 employees from the hospital in which we carried out this study, 20.7% (n = 1,139) completed the questionnaire. This sample accurately represents the hospital staff; nevertheless, it does not include medical doctors who initially excluded themselves from our

sample, nor does it include the sample of technical personnel from whom we only gathered a few completed questionnaires².

Most of the respondents were women (n = 942, 82.7%), which corresponds to the large majority of the population of employees in this hospital. The mean age of the respondents is almost 40 years old (39.65, ± 10.40 years); 73.9% of the respondents are in a personal relationship (with someone/in a couple). The dominant occupational group is composed of nurses (n = 406; 35.7%), followed by nurses' aides (n = 177; 15.5%), and a group of employees from the administration (n = 101; 8.9%). The remaining 455 respondents are scattered in various types of jobs, such as nutritionist, childcare workers, radiographers, etc.

2.2. Procedure

A questionnaire was constructed based on specific tools used to measure the level of psychosocial risk, to study the social representation of well-being at work and to analyze the potential suggestions to improve work conditions, thus to reduce the degree of psychosocial risk. This questionnaire was distributed to each of the employees of the hospital (a total of 5,495 questionnaires were distributed). The employees of the hospital were motivated by the fact that the hospital board announced that the results of the questionnaire would be used to help improve daily working conditions and to increase the overall well-being at work.

The employees who agreed to take part in this study received a printed copy of the questionnaire to be completed. When it was completed, they had a special envelope to be used via internal mail to return to our office. Anonymity was preserved; no one except for the researcher's team had access to the answers which remained anonymous. Some socio-demographic questions were included at the end of the questionnaire: the type of job, the type of ward (e.g. emergency ward), age, sex, family status³, number of children and number of dependents in the family, i.e. numbers of persons depending on the respondent (children, parents, etc.).

2.3. Materials

2.3.1. Measurement of the Psychosocial Risk

A 24-item scale was created, based on the six key factors identified by the DARES' study: (1) Work Demands (e.g. "I have an excessive amount of work."), (2) Emotional Demands (e.g. "In my work, I am in contact with people in distress or pain."), (3) Autonomy and Decision Latitude

² French ethical guidelines have been followed in the treatment of the study sample.

³ Living alone or living with someone (e.g. spouse, partner).

(e.g. “At work, I have very little freedom to decide how to do my job.”), (4) Work Relationships (e.g. “My superiors are supportive of me.”), (5) Value Conflicts (e.g. “In my work, I am pressured into doing things that I disagree with.”), and (6) Job Security (e.g. “I will be able to keep the same job until I retire.” or “I know that I will have to change jobs.”). Responses were scored on a 4-point Likert-type scale anchored from strongly disagree (1) to strongly agree (4). Among the 24 items, 10 were reversed. This tool enabled us to obtain 6 different scores, one per key factor, and an overall score of psychosocial risk.

2.3.2. Social Representation of *Well-being at work in the hospital*

Social representations were measured by a free association task, which was offered at the beginning of the questionnaire. Participants had to provide associations based on the target expression: “*well-being at work*”. They were asked to provide six words or phrases that would come to their mind when they had to think about *well-being at work in the hospital*. This question was an open-ended question that enabled us to identify how the hospital employees perceive *well-being at work in the hospital*.

In the last part of the questionnaire, participants had to answer the following open-ended question: “*Think about various professional situations that affect you especially as a person and / or a professional. Describe each one and explain how the situations could be improved*”. The results of the content analysis of the discourse provided will be briefly analyzed in this paper.

3. Results

Based on the 1,139 completed questionnaires, the following presentation of the results focuses first on the measures of the level of psychosocial risk according to the six key factors used, followed by the social representation of well-being at work in the hospital, and the suggestions provided by the respondents to improve working conditions in the studied hospital.

3.1. Factorial analysis of Psychosocial Risk measure

In order to check if the 24-item scale created for this study matches the six key factors identified by DARES, a factorial analysis, using the analysis of principal components as the extraction method, was carried out. Six factors end up loading eighteen values higher than one. An oblique rotation, with default delta (0) or kappa (4) values, was operated with the 6 factors’ solution obtained from the extraction. This model accounts for 57.12% of the item’s variance.

After the exploratory factor analysis, the six factors obtained were Work Demands, Emotional Demands, Work Relationships, Job Security, Decision Latitude and Skills Development. Among these six factors, the first four are similar to the DARES' key factors. The last two, Decision Latitude and Skills Development, are two sub-factors of the DARES's key factors "Autonomy". Only one of the DARES factors, Value Conflicts, could not be identified with this specific scale.

The Cronbach alphas were satisfactory for three factors: Work Demands (0.74), Emotional Demands (0.79) and Job Security (0.71). By deleting item 16 and 14, Work Relationship and Skills Development's Cronbach alpha changed to 0.70 and to 0.74 and became satisfactory. There is no way to improve Decision Latitude's Cronbach alpha (0.40).

A confirmatory factor analysis was run and 5 models were compared. The first model looks at psychosocial risk as a unitary construct. The second model distinguishes the 6 interrelated constructs identified by the DARES. The third model is composed of the 6 interrelated construct identified above in the explanatory factor analysis. To create the forth model, some items were deleted from the third one: item 16 and 14 and items corresponding to the Decision Latitude's factor (10, 11 and 15) to keep only the 5 factors with satisfactory Cronbach alpha. Therefore the forth model is a 5-factor model. The fifth model is an improvement of the fourth model by correlating error terms on some items⁴ that load on the same factor.

Goodness of fit was tested with χ^2 ⁵, root mean square error of approximation (RMSEA)⁶, standardized root mean square residual (SRMR)⁷ and comparative fit index (CFI)⁸. As suggested by Hu and Bentler (1999) a two-index presentation format is necessary because some index are complementary and the combination of RMSEA and SRMR is a good one because the first one is sensitive to the misspecification of the factor "loadings" and the second one is sensitive to the misspecification of the factor "covariance."

Absolute fit indices of the five models are presented in Table 1. As expected by the theoretical background, results indicate that the single-factor model (model 1) does not fit well. Psychosocial risk is not a unidimensional concept. As expected by the exploratory factor, the 6 interrelated constructs identified by the DARES (model 2) do not fit the data. The 6 interrelated

⁴ The error terms that were correlated are the error of item 1 and 2 (loaded on Work demand), 1 and 3 (loaded on Work demand), 4 and 5 (loaded on Emotional demand), 20 and 21 (loaded on Relationship at work) and 23 and 24 (Job security).

⁵ A non-significant χ^2 values correspond to an acceptable fit.

⁶ An RMSEA lower than 0.08 is acceptable and lower than 0.05 is good.

⁷ An SRMS lower than 0.10 is acceptable and lower than 0.05 is good.

⁸ A CFI upper than 0.90 is acceptable and upper than 0.95 is good

constructs identified by the explanatory factor analysis (model 3) and the 5 factor model (model 4) both have acceptable fit on the RMSEA and on the SRMR, but still fit poorly on the CFI. The last model (model 5) fits well on the RMSEA, on the SRMR and on the CFI, but does not fit well on χ^2 . The fact that χ^2 does not fit is not an unexpected result because when performing CFAs on self-reported questionnaires, it is unusual to obtain non-significant χ^2 values (Byrne, 1994).

[Insert Table 1]

Cronbach alphas and correlation between the 5 subscales can be found in Table 2. Cronbach alphas indicate good internal consistency for the various factors.

[Insert Table 2]

The comparison of level of psychosocial risk on the six different factors shows that Emotional Demands and Work Demands are the two key factors on which the level of psychosocial risk is the highest (respectively 3.02 ± 0.65 and 2.86 ± 0.70). The Skills Development is the dimension with the lowest level of risk (1.79 ± 0.69). Between these two extremes, there are Job Security (2.71 ± 0.78) and Work Relationships (2.40 ± 0.69).

3.2. Multiple Regression of socio-demographic variable on the level of psychosocial risk

A multiple regression was run in order to identify the effect of socio-demographic variables on the level of psychosocial risk. The variables taken into account were: the socio-professional category, the type of job, the type of ward (e.g. emergency ward), age, sex, family status, number of children, and number of dependent persons in the family.

The model of regression explains only 5% of the variance of the level of psychosocial risk ($R = 0.25$; $R^2 = 0.06$; adjusted $R^2 = 0.05$). From the eight socio-demographic variables included in the model, only four were significant: age, job, family status and number of dependents are the four socio-demographic variables which have an effect on psychosocial risks.

The results indicate that among hospital employees, those who are most exposed to psychosocial risks are radiographers (17.42)⁹, nurses' aides (16.30)⁹ and nurses (15.73)⁹. Those who are less exposed are nutritionist (13.53)⁹ and childcare employees (13.80)⁹.

⁹ Mean of the level of Psychosocial Risk

Employees whose age is between 30 and 39 years [35-39 years (15.89)⁹ and 30-34 years (15.72)⁹] tend to be the most exposed to psychosocial risk. The less exposed ones are those over 54 years old (14.36)⁹.

Employees living alone tend to be more exposed to psychosocial risk than those living with someone (respectively 15.43 and 15.38)⁹.

Employees having three dependent persons to take care of are those who declare the highest level of psychosocial risks (16.24)⁹; and those having no dependent person are those who declare the lowest level of psychosocial risks (14.97)⁹.

3.3. Social Representation of the *well-being at the hospital*

According to the central core theory, free associations can be classified into two complementary groups: the central core and the peripheral system. Elements of the central core have an important place in the discourse; they are the most frequently produced and the most quickly cited¹⁰. The peripheral components can be close or not from the central core: the closer they are, the more they contribute to the significance of the representation.

By combining the rank of appearance of the terms and the frequency of appearance (Vergès & Bastounis, 2001), Table 3 was constructed. The table provides the relative frequency, in percentages of occurrences for each word or expression produced and the mean rank of production. As participants were asked to produce six words or phrases, the low mean rank, corresponding to the first words or phrases produced, is established as being up to three; whatever is above three is considered a high mean rank. A term is considered to have a high frequency, when it is spontaneously produced by a minimum of 20% of the participants; terms produced by less than 20% of the participants are considered to have a low frequency of appearance (e.g. Vergès, Tyska & Vergès, 1994). In this study the boarder line chosen is 30%.

Participants were asked about their representation of *the well-being at work in the hospital* (Table 3). On the 1,139 completed questionnaires, only 1,020 participants completed this question.

The central core of the representation is composed of two elements: “utopia”, implying that well-being when working in a hospital is impossible, and “good relationships”, mainly with colleagues, respectively cited by nearly 50% and 42.55% of the employees; these terms were cited quickly, as they have a low mean rank: 2.30 for “utopia” and 2.54 for “good relationships”.

¹⁰ The mean rank is calculated in order to know if an element is globally cited quickly or not.

This allows us to formulate the hypothesis of the centrality of both the impossibility of well-being in the hospital and the importance of having good relationships when it comes to *well-being at work*. For the hospital employees who responded to our study, *well-being at work in the hospital* is possible only if “good relationships” among colleagues can exist.

The data obtained via this open-ended question is used to identify terms that hospital employees spontaneously associate with *well-being at work*. Among these terms, they mentioned numerous causes of well-being. The leading cause of *well-being at work in the hospital*, which is mentioned by the majority of the participants is to have “good relationships” (42.55%), which is achieved by relationships based on “respect” (21.76%), “being listened to” (17.45%), having high quality “communication” (14.71%) and to feel appreciated for the work accomplished which implies receiving positive “support” from colleagues, which is very often mentioned (36.5% of the mentioned terms).

[Insert Table 3]

Other causes of *well-being at work in the hospital*, identified by the hospital employees, are covered by the “absence of stress”, having enough time of “rest” and to “relax”, being able to do “quality” work with an acceptable “rhythm” and a decent “timetable”, having “enough time” and a decent “number of personnel”, with proper “equipment and adequate space”, to provide care in good conditions. For almost half of the respondents, *well-being at work in the hospital* is an “utopia” which is by definition “impossible”: it does not exist and cannot exist... The term “degradation” indicates that some hospital employees perceive *well-being at work in the hospital* as a thing of the past; for them, there is less and less *well-being at work in the hospital*.

3.4. Discourse Analysis

In order to analyze the discourse obtained through responses to the final open-ended question: “*Think about professional situations that affect you especially as a person and / or a professional; describe it and think about how the situation could be improved*”, the Alceste program developed by Reinert (2001), was used. This program allows accounting for the internal organization of a discourse by extracting classes based on the meaning, bringing together the themes and sub-themes of the main corpus.

[Insert Figure 1]

The analysis carried out via a hierarchical classification allowed identifying four distinct classes (see Figure 1): class 1 is concerned with the work climate and the relationships between colleagues and the hierarchy, with their double form: good or bad. Class 2 is about improving

hierarchical relationships and daily operations. The issue of class 3 is related to the needed support for families and patients facing illness and / or death. At last, class 4 represents elements connected to having enough time and more personnel in order to be able to accomplish higher quality work.

Among these four situations, two refer to Relationships at work, the third one refers to Emotional demands through relationships with their patients and their family et the last one refers to Work demand and professional values. This result confirms results of the social representation showing that good relation and support are the main factors of well-being at work.

People working in the medical field are not the most exposed to the factor Relationship at work, nevertheless results of discourse analyses show that good relationship at work is a major cause of concern. Result of the third class are in the line of previous studies (cf. Conditions de Travail, 2005; Santé et Itinéraire Professionnel, 2007, analyzed in the DARES' report, 2010) indicating that workers in the educational, medical and social field are those who are the most exposed to Emotional demands.

The fourth and last class support earlier studies (cf. Santé et Itinéraire Professionnel, 2007, analyzed in the DARES' report, 2010) that found workers in the educational, medical and social field are, after workers in administration, those who are the most exposed to unable quality: it can appear when there is lack of resources available for doing a good job.

4. Discussion and Conclusion

Reducing the level of psychosocial risk has a positive effect on workers' satisfaction, well-being and health (Aust & Ducki, 2004; Kompier et al., 2000; Kompier et al., 1998; Kristensen, 2000).

As in Gordon et al. (2005), in this study, the use of both quantitative and qualitative assessments enabled us to have some elements to analyze the quality of working conditions in the hospital. There were four goals to this study: (i) to measure the magnitude of six DARES' key factors of the psychosocial work environment in a specific French hospital. (ii) The second goal was to highlight the most important of the six factors for the hospital employees in order to propose specific actions to improve the well-being at work and prevent social risks. (iii) The third goal was to identify among the different socio-demographic variables those that had an effect on the level of psychosocial risk. (vi) The last goal was to study the social representation of well-being at work in the hospital and to analyze how it could be improved according to the participants.

First of all we should emphasize that, even though we have a total sample of more than one thousand participants, it only covers 20% of the total population of the hospital, which is a potential limitation of this study. The results may have been biased by the potential higher rate of participation by those who have a higher level of psychosocial risk.

The factorial analysis of the psychosocial scale allowed us to identify a 5-factor model. Among these factors, four were identical to the DARES' key factors: Work Demands, Emotional Demands, Work Relationships and Job Security. The fifth factor, being Skills Development, corresponds to a facet of the Autonomy factor of the DARES approach. The factorial analysis failed to identify the dimension of Value Conflicts.

The comparison of level of psychosocial risk on the identified 5 main factors gave us some interesting results. (i) These results, in line with the DARES' report (2010), indicate that healthcare occupations are particularly affected by the Emotional Demands factor, and this is especially true in the studied hospital. (ii) The second key factor with the highest level of risk is Work Demands. This needs to be connected to the proposals made by the respondents for improving well-being in the hospital; they focus on the fact that there are too many patients to take care of with not enough time for each patient and not enough personnel. This is to be connected to the recent reduction of employees in this specific hospital due to financial restraints. (iii) Job Security has a high standard deviation. In French public hospitals, this can be explained by the fact that, most employees are civil servants, and therefore have adequate job security. Nevertheless, some of the hospital employees have short-term employment contracts (usually between 3 and 12 months) which result in a low level of Job security.

Among all the socio-demographic variables used in this study (type of job, type of ward, age, sex, family status, number of children and of dependent persons), the multiple regression analysis allowed us to identify four variables that have an effect on the level of psychosocial risk: age, type of job, the familial status and the number of dependent persons. As a result of our study, it appears that employees between 30 and 39 years old tend to be the most exposed to psychosocial risk. The less exposed ones are those over 54. Employees living alone tend to be more exposed to psychosocial risk than those living with someone. The more dependent persons the respondents have to take care of, the highest is the level of psychosocial risks. However, this effect is quite small. The four variables predict only 5% of the variance of the level of the psychosocial risk. This is an interesting result because it means that in this hospital, the socio-demographic factors only have a modest impact on the level of psychosocial risk.

Even if socio-demographic variables have only a small effect on the level of psychosocial risk, there is an effect of the type of job. The results indicate that among hospital employees, those who are most exposed to psychosocial risks are radiographers, nurses' aides and nurses. Those who are less exposed are nutritionist and childcare employees.

These different levels of psychosocial risk seem to be related to the organization of work and to the kind of relationship the hospital staff has with the patients. For example, radiographers do not have their own patients. They work with patients coming from others wards; other wards request them to do medical examination, without being able to follow up the patients. This characteristic of their jobs may increase their level of psychosocial risk. Nurses and nurses' aides, as well as radiographers, might also be in a closer relationship with the sick patients, who can often be quite aggressive as they worry about their sickness. Nurses' aides have a level of psychosocial risk which is higher than most other occupations, especially on Emotional Demands. In the organization, nurses' aides are the ones who are most often in contact with patients and with their distress; this may explain why they have a high level of risk on Emotional Demands.

On the other hand, nutritionist mainly give positive advice about health and the childcare employees either show how to take care of newborns or tend to have an overall positive relation with sick children; moreover children do not tend to show as much their worries for their health and they are less aggressive than adult patients.

These elements can be used in order to reduce the psychosocial risks, for example by increasing the number of breaks during the day, especially for nurses and nurses' aides, who have very long, tense days.

Unfortunately, as mentioned, our large sample accurately represents the hospital staff, but does not include medical doctors who are potentially also most exposed to psychosocial risks; the sample does not either include technical personnel for whom we cannot know whether they would appear to be very exposed to psychosocial risks, like radiographers, or if they would tend to be less exposed like nutritionists. This study does not provide answers to these questions and would imply adding specific samples of both medical doctors and technical staff.

Future studies should also take into account other factors that could be predictors of the level of psychosocial risk, such as social support, effort-reward imbalance or Work-Home Interaction (Geurts, 2000; [Kouidri, Roland-Lévy & Berjot, 2012](#)). Moreover, if we could target medical

doctors who are key actors in the hospital context and who are often men, we could increase our understanding both of gender differences and how they react in terms of psychosocial risks.

The study of the social representation of well-being shows that for the hospital employees, the main cause of *well-being at work in the hospital* is based on having “good relationships”, through “support”, “respect”, “being listened to”, and having quality “communication”. Since no previous study focused on the social discourse about well-being in a hospital context, all these elements are extremely interesting in order to improve working conditions, to decrease part of the level of psychosocial risks, and to increase well-being at work.

Among the four classes identified by the hierarchical classification of the open-ended question, two have to do with relationships at work: “the lack of positive relationships” (class 1) and the need for “improving hierarchical relationships and daily operations” (class 2).

The social representation of the *well-being at work in the hospital*, and the discourse analysis indicate that the most important theme for the hospital workers is the need for positive relations at work. This is a main result in the context of prevention for well-being at work.

Mixed methodology has allowed us to understand the complexity of reality and to have a more complete view of the situation about psychosocial risks and about well-being at work.

The Work Relationships is not the factor with the highest level of risk; it comes in third place, behind Emotional Demands and Work Demands, but it is the one that hospital employees consider the most important one (see social representation of well-being at the hospital and discourse analysis). These results are in line with those indicating that stable social networks and support have a positive effect on health (Berkman & Syme, 1979; Siegrist, 1996). They show the importance of setting up space for discussion in the workplace (Detchessahar, 2013) in order to promote “communication”, “to be respected”, “to be recognized” and “to be listened to”. In fact, numerous studies (e.g. Detchessahar & Grévin, 2009; Grévin, 2012) have shown the evolution of the medical field, and some of them refer to the “managing turn” to explain today’s transformation of hospitals’ management.

Also, as previously mentioned, the study sample is mostly composed of females (82,7% of the sample are women). Even if results show that gender does not have an effect on the level of psychosocial risk, the generalization of the study’s findings is limited by the composition of the sample. Gender literature (e.g. Fischer, 2000). states that women tend to emphasize more the significance on relationships as well as on emotions. For example, when measured with an [affect](#) intensity measure, women reported greater intensity of both positive and negative affect

than men (cf. Niedenthal, Kruth-Gruber & Ric, 2006). These differences between men and women could explain both the position of Emotional Demands in terms of psychosocial risks and the central search for “good relationships” and the need for “support” which appear in more than 80% of the spontaneous ideas for improving well-being at work in our very feminine sample.

These differences between men and women could explain both the position of Emotional Demands in terms of psychosocial risks and the central search for “good relationships” and the need for “support” which is cited respectively by more than 45% and 35% of the very feminine sample.

This study will definitely contribute to the literature on psychosocial risks, as the results showed the importance of looking at the positive aspects of psychosocial risks, i.e. in terms of health and well-being. Moreover, it is the first study that uses the approach of social representations to consider the well-being at work, in a hospital, on a very large sample, in one organization in the medical field. This allows us to better understand the nature and functioning of psychosocial risks in a hospital context and provides ideas to reducing the level of risk and to increase the degree of well-being.

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Conflict of interest: none

Table 1. Absolute fit indices of the CFAs for 5 models

Model	df	X ²	RMSEA	SRMR	CFI
1	252	3000.015*	0.109	0.0952	0.590
2	237	1694.726*	0.082	0.0912	0.783
3	237	1322.044*	0.070	0.0683	0.838
4	142	898.464*	0.076	0.0645	0.865
5	137	441.309*	0.049	0.0470	0.946

* P < .001

Table 2. Cronbach alpha and correlations among the five factors

	Cronbach alpha	correlation between factors			
		1	2	3	4
1 Work demands	0.74*	-			
2 Emotional demand	0.79*	0.45*	-		
3 Skills development	0.73*	0.35*	0.05	-	
4 Relationship at work	0.70*	0.67*	0.71*	0.46*	-
5 Job insecurity	0.71*	0.85*	0.48*	0.51*	0.81*

* P < .001

Table 3. Social Representation of the *well-being at work*

1020 participants	Mean Rank					
	Among the first terms < 3.00			Among the last terms > 3.00		
Frequency Above 30%	Utopia/Impossible	47.55%	2.30	Support	36.57%	3.08
	Good relations	42.55%	2.54			
Frequency Low < 30%	Absence of stress	16.27%	2.31	To be respected	21.76%	3.45
	Enjoying Work	15.59%	2.51	To be listened to	17.45%	3.31
	Satisfaction	10.39%	2.86	Rhythm of work	15%	3.56
	Rest/Relax	9.02%	2.80	Communication	14.71%	3.47
	Quality	7.25%	2.80	To be recognized	14.12%	3.33
	Serenity	6.47%	2.24	Enough personnel	9.61%	3.13
	Degradation	5.88%	2.27	Good mood /atmosphere	8.82%	3.29
				Adapted Space & Materials	7.55%	3.08
			Good working conditions	5.98%	3.44	

Figure 1. Hierarchical classification of potential improvement

Class 1	Class 2	Class 3	Class 4
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Team Lack Communication Hierarchical Respect Spirit Conflict Consideration Good Help Each Other Bad Piece Atmosphere Participation Harmony Individual Value To Lead Manager Element Humanity	Improve Function Middle Manager Situation Way Well-Being Feeling Financial To Manage Section Boss Place Hospital Demand To Ignore To Express To Say People Support To Feel Available	Death Child End Family Life To Guide Psychology Announcement Sickness Parent Palliative Serious Taking Difficult Diagnosis Resuscitation Dead Emotional Patient To Support Hard	Time To Do Nursing Auxiliary Correct Hour To Replace Night Schedule Vacation Answer Number Quality Service Personal Month Care Like Enough Percentage Bed Done
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