

## ORIGINAL ARTICLE

# Role ambiguity, group cohesion and job satisfaction: A Demands-Resources Model (JD-R) Study from Mexico and Spain



Begoña Urien<sup>a,\*</sup>, Amparo Osca<sup>b</sup>, Lourdes García-Salmones<sup>c</sup>

<sup>a</sup> Universidad Pública de Navarra, Pamplona, Spain

<sup>b</sup> Universidad Nacional de Educación a Distancia, Spain

<sup>c</sup> Universidad Europea de Madrid (UEM), Madrid, Spain

Received 7 November 2014; accepted 30 September 2015

Available online 6 October 2016

### KEYWORDS

Role ambiguity;  
Task cohesion;  
Social cohesion;  
Job satisfaction;  
Cross-cultural  
research

**Abstract** In line with the Job Demands-Resources (JD-R) theory, this paper studies the relationship between role ambiguity (Demand) and group cohesion (Resource) to predict job satisfaction. This study was carried out at the same multinational company in Mexico and Spain ( $N = 537$ ), where blue-collar workers are organized in work groups. It is hypothesized that high levels of role ambiguity are related to low job satisfaction whereas positive high levels of group cohesion are related to high job satisfaction. In addition, it is posited that group cohesion could buffer the relationship between role ambiguity and job satisfaction. Results confirm the JD-R theory with regard to direct effects. Moderating effects have been found in both countries but, contrary to the hypotheses, since these strengthen the negative effect of role ambiguity on job satisfaction. These results are relevant since nowadays, organizations need to deal with increasingly higher levels of ambiguity. The results are also being commented from a cross-cultural research perspective.

© 2016 Fundación Universitaria Konrad Lorenz. Published by Elsevier España, S.L.U. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

### PALABRAS CLAVE

Ambigüedad de rol;  
Cohesión de tarea;  
Cohesión social;  
Satisfacción laboral;  
Investigación  
transcultural

**Ambigüedad de rol, cohesión grupal y satisfacción laboral: un estudio con el modelo demandas y recursos laborales (JD-R) en México y España**

**Resumen** Siguiendo la teoría de las demandas-recursos laborales, este trabajo estudia las relaciones entre la ambigüedad de rol (demanda), y la cohesión grupal (recurso) para predecir la satisfacción. El estudio se ha realizado en la misma multinacional en México y en España ( $N = 537$ ), donde los operarios trabajan en grupos. Las hipótesis plantean que los altos niveles de ambigüedad de rol se relacionarán con una baja satisfacción laboral, mientras que

\* Corresponding author.

E-mail address: [begona.urien@unavarra.es](mailto:begona.urien@unavarra.es) (B. Urien).

altos niveles de cohesión grupal estarán relacionados con una elevada satisfacción laboral en ambos países. Además, se plantea que la cohesión grupal amortiguará la relación entre la ambigüedad de rol y la satisfacción. Los resultados confirman la teoría demandas-recursos en relación con los efectos directos. También se han encontrado efectos moduladores en los dos países, aunque en contra de las hipótesis, pues potencian el efecto negativo de la ambigüedad en la satisfacción. Estos resultados pueden ser relevantes para las organizaciones actuales dado el creciente nivel de ambigüedad. Los resultados también se comentan desde la perspectiva de la investigación transcultural.

© 2016 Fundación Universitaria Konrad Lorenz. Publicado por Elsevier España, S.L.U. Este es un artículo Open Access bajo la licencia CC BY-NC-ND (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

The Demands-Resources, model first, theory now -JD-R- (Bakker & Demerouti, 2008, 2013), posits that working in highly demanding contexts where jobs require sustained physical and/or cognitive and emotional effort or skills caused by role ambiguity or time pressure, may produce over consumption of energy. These conditions could undermine employees' wellbeing, resulting in negative outcomes (e.g., lower levels of performance, job dissatisfaction, etc.). On the other hand, this theory indicates that job resources (physical, psychological, social and organizational facets of the job) may reduce job demands (i.e. buffering effect), can contribute to achieve work aims or can promote personal growth. Supportive peers, job control or group cohesion are examples of job resources.

The generalization of work groups in organizations as a management tool has provided an opportunity to study the JD-R theory since, work groups cannot only increase job' demands (e.g. task intensification, cognitive and social tasks) (Parent-Thirion et al., 2012), but also provide individual and group resources (e.g. peers support, more autonomy, task and social cohesion) (Treville & Antonakis, 2006). Thus, work groups could exert a double effect on workers as JD-R theory points out, depending on the balance between demands (ambiguous roles, etc.) and resources (group cohesion, etc.).

Literature on work groups underlines that role ambiguity (or absence thereof) and group cohesion are among the essential variables that contribute to successfully achieve goals (Carron, Eys, & Burke, 2007). Role ambiguity is a main demand in organizations subject to change (Antoniou, Davidson, & Cooper, 2003). Traditionally, blue-collar jobs tend to be simple, well structured, and stable over time; however, work groups seem to have altered this condition – thereby increasing job ambiguity (Kim, 2000).

In line with JD-R theory, this study seeks to test the effects of role ambiguity (demand) and group cohesion (resource) to explain job satisfaction in a multinational company from Mexico and Spain.

The Fifth European Working Conditions Survey (Parent-Thirion et al., 2012) reports that 67% of the European employees work in groups and 20% of the initiatives stored in the *Bank of Best Practices of the Secretariat of Work and Social Prevention of Mexico* (2013), are also based on work-groups. Moreover, the aforementioned work conditions survey includes poor social relationships and ambiguous

expectations in the psychosocial risks' category (Parent-Thirion et al., 2012).

According to Tims, Bakker, and Derks (2013) when job resources increase, job satisfaction tends to increase too. One important social resource in order to deal with organizational demands is group cohesion. With regard to direct relationships, cohesion is one of the most important determinants of success in groups (Evans & Dion, 2012; Rico, Alcover, & Tabernero, 2011; Smith, Arthur, Callow, Hardy, & Williams, 2013). Positive relationships have consistently been found between cohesion and job satisfaction (Picazo, Gamero, Zornoza, & Peiró, 2015; Roulin, Mayor, & Banger, 2014) and recent meta-analyses also show the relevance of this construct to explain job results (Castaño, Watts, & Tekleab, 2013). However, other studies find that not always does cohesion have a positive impact on job outcomes pointing to a more complex relationship between these two constructs (Ahronson & Cameron, 2007; Salas, Grossman, Hughes, & Coultas, 2015; Wise, 2014). JD-R theory's indirect effects could contribute to the explanation of these complex relationships, since group cohesion may exert a buffering role between job demands and job satisfaction (Jimmieson, McKimmie, Hannam, & Gallagher, 2010).

Cross-cultural studies – including data from Mexico and Spain – suggest maintaining the focus of research on the differences amongst countries (Minkov, Blagoev, & Hofstede, 2013). Van de Vliert and Janssen (2002) compared forty-two countries and found that motivational methods may not be straightforwardly transferrable among regions and Ng, Sorensen, and Yim (2009) observe that the relationship between satisfaction and performance is influenced by cultural values. JD-R theory also posits the relevance of analysing this subject, but there are not many studies addressing these differences. On exception is the research paper of Llorens, Bakker, Schaufeli, and Salanova (2006), which posits that JD-R theory, could be applied to various national contexts. Even though no specific study comparing Mexico and Spain has been found, according to Hofstede's cultural dimensions (Hofstede, 1993), Mexico and Spain are closed in relation to uncertainty avoidance whereas when it comes to power distance, Mexico seems to be a more hierarchical society, so that subordinates could expect to be told what to do in their jobs. Similarly, both countries score differently with regard to collectivism, Mexico scoring higher than Spain.

Accordingly, this paper tests the effects of role ambiguity (demand) and group cohesion (resource) to explain job satisfaction in two samples from two countries, Mexico and Spain, working in a group-based multinational organization and also analyze whether between-country differences are salient. Moreover, this paper seeks to shed some light on the effects (direct and indirect) of the two dimensions of group cohesion (social and task) on job satisfaction, as these have not yet been clearly established.

### Direct effects: role ambiguity and group cohesion

Job demands are physical, social or organizational aspects of the job that require sustained physical or mental effort, and are associated with certain physiological and psychological costs (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Bakker, Demerouti, & Verbeke, 2004; Bakker & Demerouti, 2014). Role ambiguity is referred to as the lack of clarity about duties, objectives and responsibilities needed to fulfill one's role and is often experienced in technology, social and job changes. Blue-collar jobs used to be simple, well structured, and stable over time. However, working in groups objectively increases the number and type of tasks to be performed and these new demands may introduce uncertainty with regard to the expected responsibilities or performance levels. These changes have a negative effect on workers (Askenazy, 2001; Bauer, 2004; Brenner, Fairris, & Ruser, 2004) since ambiguity tends to produce negative emotions, attitudes and cognitions such as dissatisfaction, anxiety and exhaustion on workers.

**Hypothesis 1.** Role ambiguity is negatively related to job satisfaction.

Group cohesion and job satisfaction seem to establish a consistent relationship in various samples: bank employees (Kaya, Koc, & Topcu, 2010) or hospital nurses (Roulin et al., 2014). Traditionally, cohesion has been studied as a unitary construct derived from Festinger's definition, but several authors (de Jong, Curseu, & Leenders, 2014; Hausknecht, Trevor, & Howard, 2009; Picazo et al., 2015; Rico et al., 2011; Salas et al., 2015) have recently highlighted a two-dimensional approach dividing group cohesion into two categories: task cohesion and social cohesion. Meta-analyses on job performance (Castaño et al., 2013; Chiochio and Essiembre, 2009), focused their attention on these two dimensions as both have an adequate theoretical and empirical support. Hausknecht et al. (2009) define cohesion as a twofold construct, which includes the shared commitment to the group's task and a shared attraction and mutual liking among group members. Evans and Dion (2012) meta-analysis also supports the idea that cohesive groups tend to get better results than non-cohesive groups, Castaño et al. (2013) reported significant relationships between both cohesion dimensions and job results and Picazo et al. (2015) found relationships between social cohesion and job satisfaction at the end of the group task. However, other studies reported some inconsistencies between group cohesion and job satisfaction in industrial settings (Steinhardt, Dolbier, Gottlieb, & McCalister, 2003), in military samples (Ahronson

& Cameron, 2007) or in nurses (Li, Mahrer, Klanstenfeld, & Gold, 2014), pointing to a more complex relationship between these constructs. As most research work reports a positive relationship between these variables, our second hypothesis is formulated in this direction.

**Hypothesis 2.** Task and social cohesion are positively related to job satisfaction.

### Buffering effects: group cohesion

JD-R theory also raises a twofold moderating effect as job resources might buffer the negative influence of job demands on job attitudes and/or highly demanding jobs combine with high levels of job resources might result in higher levels of positive job attitudes (Bakker & Demerouti, 2008). Some support has been found for this effect on psychological attitudes in various jobs (de Jonge, Le Blanc, Peeters, & Noordam, 2008). Social cohesion may exert a buffering role as this resource provides social support and social identity to group members (Jimmieson et al., 2010). Some authors confirmed the indirect effect of cohesion on the relationship between input and output variables (DeOrtentiis, Summers, Ammeter, Douglas, & Ferris, 2013; Li et al., 2014). Although the latter did not find any strong positive relationships between cohesion and satisfaction, they did regard cohesion as a "protective factor" against the negative effects of job demands on employees' attitudes (indirect effect).

Following other authors who have tested JD-R theory and three-way buffering effects (Jimmieson et al., 2010; Tuckey, Bakker, & Dollard, 2012; Van de Ven, Van den Tooren, & Vlerick, 2013), this paper analyses interactions between role ambiguity and the combination of both cohesion dimensions in order to test whether social and task cohesion interact among themselves and buffers the negative effect of role ambiguity on job satisfaction.

Consequently, role ambiguity is expected to be influenced by the single or combined effect of social cohesion and task cohesion on its relationships with job satisfaction.

**Hypothesis 3.** Task and social cohesion may buffer the effect of role ambiguity on job satisfaction.

## Method

### Procedure

This study was conducted after the implementation of work groups in two industrial settings located in Mexico and Spain of the same company. Some members from our research team were involved in these processes as external consultants at the design and implementation stages. Data collection was gathered at the end of formal group sessions several months after the new organization system was put in place.

## Samples

### Mexico

It consisted of 407 individuals distributed in groups from three up to 38 people. These groups manufactured and assembled engines or perform maintenance and quality tasks. Workers were all men – the majority were aged 27–36 (61%) – followed by those aged 18–26 (22%). In relation to their level of studies, the largest number (54%) had medium vocational training level, 30% had completed secondary school education and the rest did not report any formal certification.

### Spain

The sample included 130 people divided in groups ranging from eight up to 25 people and manufactured engine parts. All were men, 55% aged 27–36, 19% were aged 18–26, and 14% were aged 37–46. With regard to the level of studies, the largest level achieved was high vocational training (61%) followed by medium vocational training (16%). 7% did not report any formal education.

## Measures

Variables were measured using a Likert's scale-type questionnaire, ranging from 1, *lowest level* up to 5, *highest level*.

### Role ambiguity

It was measured with Rizzo, House, and Lirtzman (1970) scale and consists of 7 items related to the extent to which workers are aware of their objectives, responsibilities and the level of uncertainty in their instructions ("I need to skip some rules in order to perform the assigned tasks") ( $m=2.12$ ;  $f = 0.52$ ;  $\langle = 0.82/m=2.40$ ;  $f = 0.63$ ;  $\langle = 0.76$ ).

### Group cohesion

Measured with a scale based on Hyatt and Ruddy (1997) paper and divided into two subscales:

**Social cohesion.** Three items about the strength of interpersonal relationships among group members ("To what extent do you agree with the statement that there is a high level of trust between group members?") ( $m=3.42$ ;  $f = 0.66$ ;  $\langle = 0.70/m=3.78$ ;  $f = 0.64$ ;  $\langle = 0.81$ ).

**Task cohesion.** Four items about shared perceptions on the tasks, decision making, etc. ("To what extent are your thoughts about your tasks distribution compatible with

the thoughts of your group mates?") ( $m=3.19$ ;  $f = 0.67$ ;  $\langle = 0.70/m=3.76$ ;  $f = 0.56$ ;  $\langle = 0.70$ ).

**Job satisfaction.** Eight items of the classic dimensions of job satisfaction asking for the satisfaction level with several facets of the job. ("To what extent are you satisfied with your current job?") ( $m=3.64$ ;  $f = 0.51$ ;  $\langle = 0.74/m=3.95$ ;  $f = 0.48$ ;  $\langle = 0.81$ ).

**Control variable: Groups size.** Group size could influence job attitudes as well as cohesion ( $m=19.27$ ;  $f = 10.09/m=16.16$ ;  $f = 6.67$ ). This variable is one of the most frequently used as control variable and could be used to clarify relationships between criteria and predictive variables (Schönrok, 2010).

## Results

Means, standard deviations, correlations and internal consistencies (Cronbach's alpha) are depicted in Tables 1 and 2.

In order to verify the hypotheses, several hierarchical regressions were carried out. Variables were introduced into the regression equation in various steps. In Step 1, group size was used as a control variable. In Steps 2 and 3, main effects of role ambiguity and social and task cohesion were entered. At Step 4, the interaction effects were introduced and at Step 5, the three-way interaction was added. Before entering the interaction effects, new variables were created (Cohen, West, & Aiken, 2003). The change in the amount of the variance explained ( $\Delta R^2$ ) was studied in Steps 4 and 5 so as to assess the interactions.

In the Mexican sample (Table 3), all steps are significant increasing the amount of variance explained, with the exception of Step 4. Step 1 accounts for 16% of the variance on job satisfaction ( $F=6.05$ ,  $p < .01$ ). Step 2 explains 39.8% ( $F=125.98$ ,  $p < .001$ ) whereas Step 3 represents 54% ( $F=111.22$ ,  $p < .001$ ) and Step 5 explains 54.7% ( $F=64.85$ ,  $p < .001$ ).

In the Spanish sample (Table 4), all steps are also significant except for Step 1 and only three of them increase the variance on job satisfaction. Step 2 explains 21% ( $F=16.03$ ,  $p < .001$ ) while Step 3 accounts for 48.7% ( $F=26.33$ ,  $p < .001$ ). Step 5 predicts 52.8% ( $F=17.24$ ,  $p < .001$ ).

Hierarchical regression shows a significant direct and negative relationship between job ambiguity and job satisfaction in both samples ( $\beta = -.62$ ,  $p < .01$ ;  $\beta = -.35$ ,  $p < .001$ ), thus Hypothesis 1 has been confirmed.

**Table 1** Means, standard deviations, correlations and scale reliabilities (Mexico).

Variable	M	SD	1	2	3	4	5
1. Size	19.27	10.09					
2. Role ambiguity	2.12	.52	.09	(.82)			
3. Social cohesion	3.42	.66	-.10	-.43**	(.70)		
4. Task cohesion	3.19	.67	-.06	-.46**	.65**	(.70)	
5. Job satisfaction	3.64	.51	-.12*	-.62**	.57**	.59**	(.74)

Note. Cronbach's alphas appear along the diagonal in parenthesis.  $N=407$ .

\*  $p < .05$ .

\*\*  $p < .001$ .

**Table 2** Means, standard deviations, correlations and scale reliabilities (Spain).

Variable	M	SD	1	2	3	4	5
1. Size	12.16	6.88					
2. Role ambiguity	2.40	.63	.16 <sup>†</sup>	(.76)			
3. Social cohesion	3.78	.64	-.14	-.39**	(.81)		
4. Task cohesion	3.76	.56	-.09	-.37**	.67**	(.70)	
5. Job satisfaction	3.95	.48	-.10	-.47**	.63**	.58**	(.81)

Note. Cronbach's alphas appear along the diagonal in parenthesis. N = 130.

<sup>†</sup> p < .05.  
 \*\* p < .001.

**Table 3** Moderated regression results of Role ambiguity × Social cohesion × Task cohesion on job satisfaction (Mexico).

Variable	Step 1	Step 2	Step 3	Step 4	Step 5
<i>Control variable</i>					
Group Size	-.12**	-.06	-.04	-.04	-.04
<i>Main effects</i>					
Role ambiguity		-.62**	-.41***	-.32 <sup>†</sup>	-.12
Social cohesion			.21***	.39 <sup>†</sup>	.30
Task cohesion			.26***	.14	.09
<i>Interaction effect</i>					
R. ambiguity × Social cohesion				-.22	-.49 <sup>†</sup>
R. ambiguity × Task cohesion				.13	-.22
R. ambiguity × S. cohesion × T. cohesion					.56*
R <sup>2</sup>	.016	.398	.540	.541	.547
Model F change	6.05**	125.98***	111.22***	74.05***	64.85***
ΔR <sup>2</sup>	.01 <sup>†</sup>	.38**	.14**	.001	.006*

Note. All entries are standardized regression coefficients. N = 407.

<sup>†</sup> < .10.  
 \* p < .05.  
 \*\* p < .01.  
 \*\*\* p < .001.

**Table 4** Moderated regression results of Role ambiguity × Social cohesion × Task cohesion on job satisfaction (Spain).

Variable	Step 1	Step 2	Step 3	Step 4	Step 5
<i>Control variable</i>					
Group size	-.00	-.00	-.00	-.00	-.00
<i>Main effects</i>					
Role ambiguity		-.35***	-.17**	-.59*	-.17
Social cohesion			.28***	.55*	.34 <sup>†</sup>
Task cohesion			.20**	-.32	-.46 <sup>†</sup>
<i>Interaction effect</i>					
R. ambiguity × Social cohesion				-.11	-.57*
R. ambiguity × Task cohesion				.21*	-.00
R. ambiguity × S. cohesion × T. cohesion					.63*
R <sup>2</sup>	.011	.221	.487	.503	.528
Model F change	1.265	16.032***	26.330***	18.360***	17.249***
ΔR <sup>2</sup>	.01	.21***	.26***	.016	.025*

Note. All entries are standardized regression coefficients. N = 130.

<sup>†</sup> < .10.  
 \* p < .05.  
 \*\* p < .01.  
 \*\*\* p < .001.

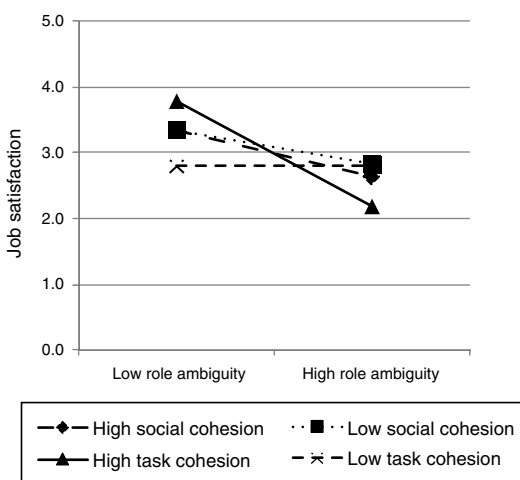
Direct effects of social and task cohesion on job satisfaction are strongly established in Step 3 in both samples ( $\beta = .21, p < .001$ ;  $\beta = .26, p < .001$  /  $\beta = .28, p < .001$ ;  $\beta = .20, p < .01$ ) thus, **Hypothesis 2** could also be corroborated.

The comparison between Steps 2 and 3 in Mexico (Table 3) and Spain (Table 4) reveals that the amount of variance explained by these two Steps is different: role ambiguity (Step 2) explains 39% of the variance in the Mexican sample whereas it explains 22% in relation to the Spanish one. The increment of the variance explained by Step 3 (cohesion dimensions) is 14% in the Mexican sample whereas it reaches 26% in the Spanish one.

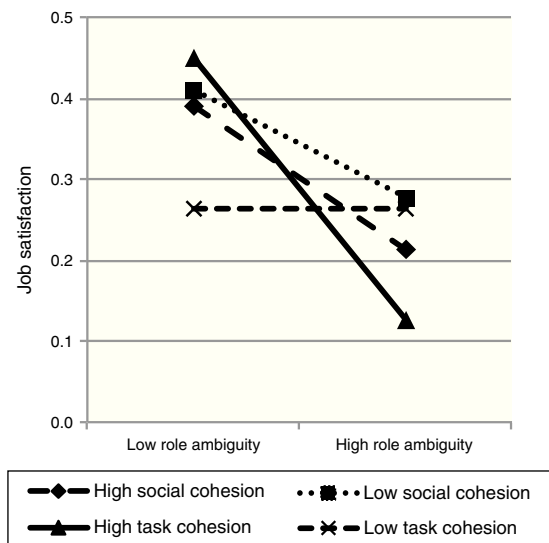
Two-way buffering effects are shown in Step 4 from both samples. However, these steps do not increase the variance explained. Nevertheless, two relations can be reported between role ambiguity and social cohesion ( $\beta = -.49, p < .10$ ) in Mexico and between role ambiguity and task cohesion ( $\beta = .21, p < .05$ ) in Spain.

In both samples the increment of variance explained by this Step 5 is significant ( $\Delta R^2 = .006, p < .05$ ;  $\Delta R^2 = .025, p < .05$ ) and a three-way interaction among role ambiguity, social cohesion and task cohesion to predict job satisfaction can be reported ( $\beta = .56, p < .05$ ;  $\beta = .63, p < .05$ ).

Figs. 1 and 2 show that at low levels of role ambiguity, task cohesion has a strong positive effect on job satisfaction in both samples, whereas at high levels of role ambiguity, employees perceiving higher levels of task cohesion report lower levels of job satisfaction. At low levels of task cohesion, low or high role ambiguity does not exert any clear effect on job satisfaction in both samples. Additionally, in the Mexican sample the level of job satisfaction at high or low levels of social cohesion is higher when role ambiguity is low. In the Spanish sample, the same effect is found, but the negative impact is more clearly observed when social cohesion is high. Results point to a moderating effect among these variables but not in the expected direction and buffering **Hypothesis 3** cannot be accepted.



**Figure 1** Three-way interaction effect between role ambiguity, social cohesion and task cohesion to predict job satisfaction, Mexico.



**Figure 2** Three-way interaction effect between role ambiguity, social cohesion and task cohesion to predict job satisfaction, Spain.

**Discussion**

The aim of this article was to test JD-R theory to predict job satisfaction in two samples from two different countries working in the same multinational company organized in groups. The introduction of work groups implied the redesign of jobs so that new and complex tasks were assigned and these new requirements could have incremented role ambiguity. On the other hand, groups developed processes and some estates emerged (i.e. cohesion) and both became resources (Schaufeli & Bakker, 2004). In our opinion, the main contribution of this paper is to study the effect of group cohesion (i.e. social and task) in more depth analyzing its direct and moderating influence on job satisfaction.

Results corroborated direct relationships as the JD-R theory suggested. Negative effect of role ambiguity was clear (Hypothesis 1): the more uncertainty there is about the tasks, goals and levels of performance, the less satisfied workers are. On the other hand, both task and social cohesion maintained a strong positive relationship with job satisfaction (Hypothesis 2).

It is important to underline that the negative effect of job ambiguity was more relevant in the Mexican sample. According to Hofstede (1993, 2015), and although Mexico and Spain obtain similar results with regard to uncertainty, differences in power distance are important. Due to that, Mexican employees might need more direction and clearer instructions from supervisors, whereas Spaniards would be able to assume responsibilities attached to a more decentralized way of working. Apart from this divergent result, results remained similar, thus suggesting the salience role of organizational procedures over cultural differences.

With regard to the buffering effects, results showed that both types of cohesion interact with the effect of role ambiguity on job satisfaction, but these results did not support buffering effects (Hypothesis 3). Although highly cohesive groups may contribute to organizational objectives, under complex job conditions as highly ambiguous in our case,

cohesion could produce the opposite effect increasing job dissatisfaction or other negative work related attitudes as has been found in various studies (Ahronson & Cameron, 2007; Steinhart et al., 2003; Westman, Bakker, Roziner, & Sonnentag, 2011; Wise, 2014).

Another explanation could be grounded on the level of effort put by the members of the group in order to develop social and more particularly task cohesion. Although group members may have developed a set of behaviors focused on the task, the assigned responsibilities may in fact be seen as so ambiguous that these strategies may not help them to fulfill their job demands. This explanation is consistent with the line of research on the role that norms could play when it comes to predict employee' intentions and behaviors within the organization (Ajzen, 1991; Castañeda, 2015). This could happen more clearly in the Mexican sample, since role ambiguity establishes a stronger relationship with job satisfaction.

This finding could also be explained based on the different nature of the two dimensions of cohesion (social and task) combined in this study compare to other studies that combine homogeneous variables either both cognitive or both emotional (Tuckey et al., 2012; Van de Ven, van den Tooren, & Vlerick, 2013) and/or also be pointing to more complex relationships between variables (e.g. curvilinear relationships, other modulators, the effect of time), as Wise (2014) or Picazo et al. (2015) posit in their recent papers.

From an applied perspective, as job contexts and tasks requirements currently change more often due to technological and organizational innovation (i.e. role ambiguity might increase), a regular two-way flow of information (e.g. outcomes, behavior, difficulties in tasks' accomplishment, customers-clients needs) should be systematically carried out by organizations (Fruhen & Keith, 2014). As direct effects of cohesion on job satisfaction have been established, companies should invest in some group activities (i.e. time to reflect on group tasks) so as to develop positive attitudes. Moreover, cohesion is characterized as an emergent state (Cannon-Bowers & Bowers, 2011); hence more constant attention (i.e. monitoring) should be applied in order to keep the most adequate level of both cohesion' dimensions. Monitoring could be even more relevant since the buffering role of cohesion could also depend on job demands. Task and social cohesion seem to be needed in any kind of group, but the levels of both should be adjusted to the tasks and the context as it could exert a negative effect on relevant job attitudes – especially when companies have to overcome uncertain conditions that could affect role demands. These findings should be taken into consideration to customize group training, group norms and other development and management activities in order to link them with the pace of change that companies need to undergo. Managers should not only learn at what levels of task and social cohesion their groups function best but also what types of group resources should not be implemented in order to improve certain job situations (i.e. role ambiguity). Moreover, companies should take into consideration divergences related to cultural differences.

From the cross-cultural perspective, these results are aligned with the studies that report the adequacy of JD-R theory in various countries (Llorens et al., 2006), although with some differences. However, more research would be

needed in order to assess the antecedents of job satisfaction across countries (Santamaría, de la Mata, Hansen, & Ruiz, 2010). Even though some divergences between Mexico and Spain have been found in line with Hofstede's theory (1993; 2015), similarities are salient as working in the same company prevails over the country of origin. This salience of similarities could be grounded on the mechanisms that multinational companies implement in order to reduce cultural differences.

The nature of this study meant the imposition of some constrains so as to be conducted in real working settings. Firstly, research studies should test these hypotheses at group level in similar samples. Salas et al. (2015) recommend a multilevel approach as it gives greater analysis flexibility with a longitudinal perspective. As cohesion is an inherently temporal construct, teams' development phases should be taken into account since the two dimensions of cohesion could be more salient depending on what the stage of the group currently is as Picazo et al. (2015) have confirmed. Secondly, further clarification on the relationship between role ambiguity, task and social cohesion and job satisfaction would be needed, as according to JD-R theory, our findings are in the unexpected direction (de Jong et al., 2014; Wise, 2014).

This paper confirms the relevance that direct effects of role ambiguity (demand) and task and social cohesion (resources) play to explain job satisfaction in two countries and in a based-groups organization. The negative moderating role of task and social cohesion combined has also been established in the relationship between the job demand and job satisfaction. This paper also introduces two innovations: the origin of the samples and the study of the combined effects of job resources of different nature in order to assess their effects on the relationship between demands and work attitudes. These results are relevant since organizations need to deal with increasing levels of ambiguity and complexity due to rapid change and although highly cohesive groups have been positively related to better job results, under certain circumstances these groups could be ineffective.

## References

- Ahronson, A., & Cameron, J. E. (2007). The nature and consequences of group cohesion in a military sample. *Military Psychology, 19*(1), 9–25. <http://dx.doi.org/10.1080/0895600701323277>
- Ajzen, I. (1991). *The theory of planned behavior. Organizational Behavior and Decision Processes, 50*, 179–211.
- Antoniou, A. G., Davidson, M. J., & Cooper, C. L. (2003). Occupational stress, job satisfaction and health state in male and female junior hospital doctors in Greece. *Journal of Managerial Psychology, 18*(6), 592–621. <http://dx.doi.org/10.1108/02683940310494403>
- Askenazy, P. (2001). Innovative workplace practices and occupational injuries and illnesses in the United States. *Economic and Industrial Democracy, 22*(4), 485–516. <http://dx.doi.org/10.1177/0143831X01224003>
- Bakker, A. B., & Demerouti, E. (2008). Towards a model of work engagement. *Career Development International, 13*(3), 209–223. <http://dx.doi.org/10.1108/13620430810870476>
- Bakker, A. B., & Demerouti, E. (2013). La teoría de las demandas y los recursos laborales. *Revista de psicología del Trabajo*

- y de las organizaciones, 29(3), 107–115. <http://dx.doi.org/10.5093/tr2013a16>
- Bakker, A. B., & Demerouti, E. (2014). Job demands-resources theory. In P. Y. Chen, & C. L. Cooper (Eds.), *Work and wellbeing: Wellbeing: A complete reference guide* (Vol. III) (pp. 37–64). Chichester, UK: Wiley-Blackwell.
- Bakker, A. B., Demerouti, E., & Verbeke, W. (2004). Using the job demands-resources model to predict burnout and performance. *Human Resource Management*, 43(1), 83–104. <http://dx.doi.org/10.1002/hrm.20004>
- Banco de Buenas Prácticas de Innovación Laboral. (2013). *Secretaría de Trabajo y Previsión Social. México.* Retrieved from [http://buenaspracticass.stps.gob.mx/buenaspracticass/result\\_binnova.aspx?year=0&area=1&empsize=100&ent=100&sector=4&pclave=](http://buenaspracticass.stps.gob.mx/buenaspracticass/result_binnova.aspx?year=0&area=1&empsize=100&ent=100&sector=4&pclave=)
- Bauer, T. K. (2004). High Performance workplace practices and job satisfaction: Evidence from Europe. *Discussion Paper Series* (1265), 1–33.
- Brenner, M. D., Fairris, D., & Ruser, J. (2004). Flexible work practices and occupational safety and health: Exploring the relationship between cumulative trauma disorders and workplace transformation. *Industrial Relations: A Journal of Economy and Society*, 43(1), 242–266. <http://dx.doi.org/10.1111/j.0019-8676.2004.00325.x>
- Cannon-Bowers, J. A., & Bowers, C. (2011). Team development and functioning. In S. Zedeck (Ed.), *Handbook of industrial and organizational psychology: Building and developing the organization* (Vol. 1) (pp. 597–650). Washington, DC: American Psychological Association. <http://dx.doi.org/10.1037/12169-019>
- Carron, A. V., Eys, M. A., Burke, S. M., Jowett, S., & Lavallee, D. (2007). Team cohesion. In S. Jowett, & D. Lavallee (Eds.), *Social Psychology in Sport* (pp. 91–102). Champaign, IL: Human Kinetics.
- Castañeda, D. I. (2015). Knowledge sharing: The role of psychological variables in leaders and collaborators. *Suma Psicológica*, 22(1), 63–69. <http://dx.doi.org/10.1016/j.sumpsi.2015.05.008>
- Castaño, N., Watts, T., & Tekleab, A. G. (2013). A reexamination of the cohesion–performance relationship meta-analyses: A comprehensive approach. *Group Dynamics: Theory, Research, and Practice*, 17(4), 207–231. <http://dx.doi.org/10.1037/a0034142>
- Chiochio, F., & Essiembre, H. (2009). Cohesion and performance: A meta-analytic review of disparities between project teams, production teams, and service teams. *Small Group Research*, 40(4), 382–420. <http://dx.doi.org/10.1177/1046496409335103>
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Mahwah, NJ: Lawrence Erlbaum.
- de Jong, J. P., Curşeu, P. L., & Leenders, R. T. A. (2014). When do bad apples not spoil the barrel? Negative relationships in teams, team performance, and buffering mechanisms. *Journal of Applied Psychology*, 99(3), 514–522. <http://dx.doi.org/10.1037/a0036284>
- de Jonge, J., Le Blanc, P. M., Peeters, M. C., & Noordam, H. (2008). Emotional job demands and the role of matching job resources: A cross-sectional survey study among health care workers. *International Journal of Nursing Studies*, 45(10), 1460–1469. <http://dx.doi.org/10.1016/j.ijnurstu.2007.11.002>
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, 86(3), 499–512. <http://dx.doi.org/10.1037/0021-9010.86.3.499>
- DeOrentiis, P. S., Summers, J. K., Ammeter, A. P., Douglas, C., & Ferris, G. R. (2013). Cohesion and satisfaction as mediators of the team trust–team effectiveness relationship: An interdependence theory perspective. *Career Development International*, 18(5), 521–543. <http://dx.doi.org/10.1108/CDI-03-2013-0035>
- Eurofound. (2012). *Fifth European Working Conditions Survey. Luxembourg: Publications Office of the European Union.*
- Evans, C. R., & Dion, K. L. (2012). Group cohesion and performance: A meta-analysis. *Small Group Research*, 43(6), 690–701. <http://dx.doi.org/10.1177/1046496412468074>
- Fruhen, L. S., & Keith, N. (2014). Team cohesion and error culture in risky work environments. *Safety Science*, 65, 20–27. <http://dx.doi.org/10.1016/j.ssci.2013.12.011>
- Hausknecht, J. P., Trevor, C. O., & Howard, M. J. (2009). Unit-level voluntary turnover rates and customer service quality: Implications of group cohesiveness, newcomer concentration, and size. *Journal of Applied Psychology*, 94(4), 1068–1075. <http://dx.doi.org/10.1037/a0015898>
- Hofstede, G. (1993). Cultural constraints in management theories. *The Academy of Management Executive*, 7(1), 81–94. <http://dx.doi.org/10.5465/AME.1993.9409142061>
- Hofstede, G. J. (2015). Culture's causes: The next challenge. *Cross Cultural Management*, 22(4), 545–569. <http://dx.doi.org/10.1108/CCM-03-2015-0040>
- Hyatt, D. E., & Ruddy, T. M. (1997). An examination of the relationship between work group characteristics and performance: Once more into the breach. *Personnel Psychology*, 50(3), 553–585. <http://dx.doi.org/10.1111/j.1744-6570.1997.tb00703.x>
- Jimmieson, N. L., McKimmie, B., Hannam, R. L., & Gallagher, J. (2010). An investigation of the stress-buffering effects of social support in the occupational stress process as a function of team identification. *Group Dynamics: Theory, Research, and Practice*, 14(4), 350–367. <http://dx.doi.org/10.1037/a0018631>
- Kaya, N., Koc, E., & Topcu, D. (2010). An exploratory analysis of the influence of human resource management activities and organizational climate on job satisfaction in Turkish banks. *The International Journal of Human Resource Management*, 21(11), 2031–2051. <http://dx.doi.org/10.1080/09585192.2010.505104>
- Kim, S. (2000). Behavioral commitment among the automobile workers in South Korea. *Human Resource Management Review*, 9(4), 419–451. [http://dx.doi.org/10.1016/S1053-4822\(99\)00028-5](http://dx.doi.org/10.1016/S1053-4822(99)00028-5)
- Li, A., Early, S. F., Mahrer, N. E., Klaristenfeld, J. L., & Gold, J. I. (2014). Group cohesion and organizational commitment: Protective factors for nurse residents' job satisfaction, compassion fatigue, compassion satisfaction, and burnout. *Journal of Professional Nursing*, 30(1), 89–99. <http://dx.doi.org/10.1016/j.profnurs.2013.04.004>
- Llorens, S., Bakker, A. B., Schaufeli, W., & Salanova, M. (2006). Testing the robustness of the job demands-resources model. *International Journal of Stress Management*, 13(3), 378–391. <http://dx.doi.org/10.1037/1072-5245.13.3.378>
- Minkov, M., Blagoev, V., & Hofstede, G. (2013). The boundaries of culture: Do questions about societal norms reveal cultural differences? *Journal of Cross-Cultural Psychology*, 44(7), 1094–1106. <http://dx.doi.org/10.1177/0022022112466942>
- Ng, Th. W. H., Sorensen, K. L., & Yim, F. H. K. (2009). Does the job satisfaction–job performance relationship vary across cultures? *Journal of Cross-Cultural Psychology*, 40(5), 761–796. <http://dx.doi.org/10.1177/0022022109339208>
- Picazo, C., Gamero, N., Zornoza, A., & Peiró, J. M. (2015). Testing relations between group cohesion and satisfaction in project teams: A cross-level and cross-lagged approach. *European Journal of Work and Organizational Psychology*, 24(2), 297–307. <http://dx.doi.org/10.1080/1359432X.2014.894979>
- Rico, R., Alcover, C. M., & Tabernero, C. (2011). Work team effectiveness, a review of research over the last decade (1999–2009) [Efectividad de los Equipos de Trabajo, una Revisión de la Última Década de Investigación (1999–2009)]. *Psychology in Spain*, 15(1), 57–79. <http://dx.doi.org/10.5093/tr2010v26n1a4>



- Rizzo, J. R., House, R. J., & Lirtzman, S. I. (1970). Role conflict and ambiguity in complex organizations. *Administrative Science Quarterly*, 150–163. <http://dx.doi.org/10.2307/2391486>
- Roulin, N., Mayor, E., & Bangerter, A. (2014). How to satisfy and retain personnel despite job-market shortage: Multilevel predictors of nurses' job satisfaction and intent to leave. *Swiss Journal of Psychology*, 73(1), 13–24. <http://dx.doi.org/10.1024/1421-0185/a000123>
- Salas, E., Grossman, R., Hughes, A. M., & Coultas, C. W. (2015). Measuring team cohesion: Observations from the science. *Human Factors*, 57(3), 365–374. <http://dx.doi.org/10.1177/0018720815578267>
- Santamaría, A., de la Mata, M. L., Hansen, T. G. B., & Ruiz, L. (2010). Cultural self-construals of Mexican, Spanish, and Danish college students: Beyond independent and interdependent self. *Journal of Cross-Cultural Psychology*, 41(3), 471–477. <http://dx.doi.org/10.1177/0022022109359694>
- Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior*, 25(3), 293–315. <http://dx.doi.org/10.1002/job.248>
- Schönrok, J. E. M. (2010). Innovation at large: Managing multi-organization, multi-team projects. In W. Elsner (Ed.), *Structural change and structural policies* (Vol. 20). Frankfurt am Main: Peter Lang Verlag.
- Smith, M. J., Arthur, C. A., Hardy, J., Callow, N., & Williams, D. (2013). Transformational leadership and task cohesion in sport: The mediating role of intra-team communication. *Psychology of Sport and Exercise*, 14(2), 249–257. <http://dx.doi.org/10.1016/j.psychsport.2012.10.002>
- Steinhardt, M. A., Dolbier, C. L., Gottlieb, N. H., & McCalister, K. T. (2003). The relationship between hardiness, supervisor support, group cohesion, and job stress as predictors of job satisfaction. *American Journal of Health Promotion*, 17(6), 382–389. <http://dx.doi.org/10.4278/0890-1171-17.6.382>
- Tims, M., Bakker, A. B., & Derks, D. (2013). The impact of job crafting on job demands, job resources, and well-being. *Journal of Occupational Health Psychology*, 18(2), 230–240. <http://dx.doi.org/10.1037/a0032141>
- Treville, S. D., & Antonakis, J. (2006). Could lean production job design be intrinsically motivating? Contextual, configurational, and levels-of-analysis issues. *Journal of Operations Management*, 24(2), 99–123. <http://dx.doi.org/10.1016/j.jom.2005.04.001>
- Tuckey, M. R., Bakker, A. B., & Dollard, M. F. (2012). Empowering leaders optimize working conditions for engagement: A multi-level study. *Journal of Occupational Health Psychology*, 17(1), 15–27. <http://dx.doi.org/10.1037/a0025942>
- Van de Ven, B., van den Tooren, M., & Vlerick, P. (2013). Emotional job resources and emotional support seeking as moderators of the relation between emotional job demands and emotional exhaustion: A two-wave panel study. *Journal of Occupational Health Psychology*, 18(1), 1–8. <http://dx.doi.org/10.1037/a0030656>
- Van de Vliert, E., & Janssen, O. (2002). Better than performance motives as roots of satisfaction across more and less developed countries. *Journal of Cross-Cultural Psychology*, 33(4), 380–397. <http://dx.doi.org/10.1177/00222102033004002>
- Westman, M., Bakker, A. B., Roziner, I., & Sonnentag, S. (2011). Crossover of job demands and emotional exhaustion within teams: A longitudinal multilevel study. *Anxiety, Stress, & Coping*, 24(5), 561–577. <http://dx.doi.org/10.1080/10615806.2011.558191>
- Wise, S. (2014). Can a team have too much cohesion? The dark side to network density. *European Management Journal*, 32(5), 703–711. <http://dx.doi.org/10.1016/j.emj.2013.12.005>