The Work Team`s Internal Functioning: Bidimensionality, Interdependence and Performance

O Funcionamento Interno das Equipes de Trabalho: Bidimensionalidade, Interdependência e Performance

Ana Luísa Sousa Pinto
Doutoranda na área da Psicologia, na especialidade da Psicologia das Organizações, Trabalho e dos Recursos Humanos - Faculdade de Psicologia e de Ciências da Educação da Universidade de Coimbra.
Mestre em Psicologia do Trabalho e das Organizações pela Faculdade de Psicologia e Ciências da Educação da Universidade de Coimbra – UC, Coimbra, Portugal
luisa.s.pinto@gmail.com

Paulo Renato Lourenço
prenato@fpce.uc.pt

Este trabalho foi licenciado com uma Licença Creative Commons - Atribuição – Não Comercial 3.0 Brasil
ABSTRACT

In this study, based on the work of Rousseau, Aubé and Savoie (2006a, 2006b), we will present the results of a research whose goal consisted of analysing the relationship between the internal functioning of teams and their team task performance, as well as the moderating role of task interdependence in that relationship. The results of our study were shown to be partially consistent with those of Rousseau, Aubé and Savoie (2006b). In fact, if, on the one hand, the dimensions of the internal functioning of work teams are positively related to team performance, on the other hand, no empirical support was found concerning a moderation effect of task interdependence.

Keywords: Work team's internal functioning; team; task interdependence; team performance; dimensions of the internal functioning of work teams.

RESUMO

Neste estudo, baseado no trabalho de Rousseau, Aubé e Savoie (2006a, 2006b), apresentam-se os resultados de uma investigação cujo objetivo consistiu em analisar a relação entre o funcionamento interno das equipes de trabalho e o desempenho da tarefa grupal, bem como o papel moderador da interdependência de tarefa naquela relação. Os resultados da investigação revelaram-se parcialmente consistentes com os de Rousseau, Aubé e Savoie (2006b). Na verdade, se, por um lado, as dimensões do funcionamento interno das equipes de trabalho estão positivamente relacionadas com o desempenho grupal, por outro lado, não foi encontrado suporte empírico no que diz respeito ao efeito de moderação da interdependência em redor da tarefa.

Palavras-Chave - Funcionamento interno das equipes de trabalho; interdependência de tarefa; desempenho da equipe; interdependência de tarefa; dimensões do funcionamento interno das equipes de trabalho.
1 INTRODUCTION

The affirmation of the market model over that of economy and centralized planning, as well as globalization, were events that had a great impact on the functioning of organizations and in human resources management systems (Tavares, 2006). These events are regarded as the main reasons for the intensification of competitiveness among organizations, reduction in production costs, increase in productivity and in the quality of delivery of goods and services.

In that spirit, work teams appear, today, to be a promising solution for company managers, who are searching for new ways of organizing work to deal with these events [Take the example of the notable success of Japanese organizations, namely the importance which is given in that success to “quality circles”, seen as a technique which induces productivity increases (Gomes, 2000)].

Given these reasons, then, it is not surprising that many of the studies in this theme – work teams – focus on the factors that determine team effectiveness (e.g., Barrick et al., 1998; Cartwright, 1968; Davis, 1969; Gil, Rico & Sánchez-Manzanares, 2008; Hackman, 1987; Harrison, Price e Bell, 1998; Jehn, 1995; Kozlowski & Ilgen, 2006; Lourenço & Passos, in press; Neuman & Wright, 1999; Seashore, 1954; Shaw, 1981). These studies focus primarily on behaviours, attitudes, cognitions and feelings of work team members, under the designation of “team processes” (Marks, Mathieu & Zaccaro, 2001).

The current study, resembling that of Rousseau, Aubé and Savoie (2006b), which we replicated, focuses on the level of behaviours, attempting to contribute to a better understanding of the way teams function, as well as leading us to the emergence of guidelines which allow, at an interventional level, for a better effectiveness in work teams management.

2 BACKGROUND

The literature about teams converges on the fact that team processes are responsible for aiding the accomplishment of common tasks [e.g. cooperation – Campion, Papper & Medsker (1996); psychological support – Campion et al. (1993,1996); communication – Barry & Stewart (1997), resource management –
Weldon et al. (1991), etc.]. However, there is no consensus concerning how to conceptualize behaviours relative to the internal functioning of teams (some authors study them one by one, others, in spite of believing in the multidimensionality of behaviours, do not test them). Rousseau, Aubé and Savoie (2006a; 2006b) proposed a multidimensional conception of the internal functioning (IF) of work teams – which they defined as the set of behaviours which members manifest and which are susceptible to facilitate the development of common tasks in teams – and tested it.

The studies of Rousseau, Aubé and Savoie (2006b) focused on 71 work teams (376 team members and 71 leaders, constituted by an average of 6 members each (SD=4.4).

The first phase, which is carefully detailed in the article Teamwork Behaviors. A review and an integration of frameworks, published in 2006, the authors: a) summarized the multiple framing about the behaviours of work teams (which were scattered in the literature); b) proposed a hierarchy of relevant behaviours which define work in a team, and, c) highlighted the role of task interdependence, task complexity and collective autonomy as fundamental requirements so that work team behaviours can be successfully accomplished.

We highlight from this article, by Rousseau, Aubé and Savoie (2006a), the seven dimensions associated with functions related to performance on the one hand, and with team management on the other hand (cooperation, communication, psychological support, conflict management, work planning/organization, resource management and innovation support), in which the authors attempted to evaluate the validity of the multidimensional conception of work team behaviours.

In the second phase, described in Le fonctionnement interne des équipes de travail: conception e mesure, also published in 2006 by Rousseau, Aubé and Savoie, the authors presented the results of a study performed on-site, which allowed them to analyse: (a) the validity of the multidimensional conception of work team behaviours, in an operational plan; (b) how the dimensions of work teams’ internal functioning relate to task performance, and, (c) the way in which task interdependence moderates the relationship between the internal functioning and the task performance of the team.

The results, acquired through exploratory factor analysis with oblimin rotation, did not confirm the multidimensional conception of work teams’ internal functioning.
Instead, they brought to light a bidimensional structure which they designated interpersonal support (the degree by which team members optimize the quality of their interactions, including processes such as cooperation, communication, psychological support and conflict management) and work management (essentially related to the task). One should not conclude that these two dimensions are mutually exclusive. On the contrary, they should be seen as complementary, and capable of performing a positive and distinct role in the fulfilment of common tasks.

Rousseau, Aubé and Savoie also showed, through the use of the correlation matrix, that the dimensions of work teams’ internal functioning relate positively to task performance. From this perspective, the results allowed the conclusion that “interpersonal support” and “work management” can have a moderate effect on team effectiveness (Bryman & Cramer, 1990/1993; Cohen & Holliday, 1982). The “interpersonal support” dimension explained 27% of the team’s effectiveness variance, and the “work management” dimension explained 16% of the team’s effectiveness variance. When the team members support each other and structure their work, they are able to attain higher performance. The results are particularly interesting since, to validate this claim and reduce data skew, two different sources were used (team members and team leader).

In their research, Rousseau, Aubé and Savoie (2006b) also worried about explaining the moderating role of the task interdependence in the relationship between teams’ internal functioning and effectiveness, resorting to a hierarchical regression analysis. They showed that, the higher the task interdependence, the stronger the relationship between the dimensions of the team’s internal functioning and the team performance.

2.1 Objectives and hypotheses of research

We shall now make clear some of the points which we believe are relevant for a full understanding of the empirical research which we performed. We will approach the objectives which we proposed and focus on the research hypotheses.
The aim of this study consisted of trying to analyse the consistency of the results of Rousseau, Aubé and Savoie (2006b), now using a sample of teams taken from Portuguese companies/organizations.

**In particular:** we intend to test the bidimensional conception of the work team’s functioning and have, with that in mind, formulated the following hypothesis:

Hypothesis 1 – The internal functioning of work teams is constituted by two dimensions: the interpersonal support dimension and the work management dimension.

To analyse the way in which the dimensions of internal functioning (interpersonal support and work management) relate to performance, we formulated the following hypothesis:

Hypothesis 2 – Each of the dimensions of work teams’ internal functioning is positively related to team performance.

Finally, to ascertain if task interdependence plays a moderating role in the relationship between internal functioning and effectiveness, we formulated the following research hypotheses:

Hypothesis 3 – The relationship between the interpersonal support of teams’ internal functioning dimension and performance is moderated by task interdependence: the higher the task interdependence, the stronger the relationship between the interpersonal support dimension and performance.

Hypothesis 4 – The relationship between the work management dimension of teams’ internal functioning and performance is moderated by task interdependence: the higher the task interdependence, the stronger the relationship between the work management dimension and performance.

### 3 METHODOLOGY

This study is of a non-experimental nature, being an ex-post-facto research (correlational design).

Given the proposed objectives, in order to collect data, we used a self-administered questionnaire. Since, as we’ve already noted, it was our goal to replicate Rousseau, Aubé and Savoie’s study, we used the Portuguese version (translated and adapted) of the instruments that the authors used.
- Data gathering procedures

The data were collected at three Portuguese companies/organizations, from the services and production sectors. In each company/organization there were two types of data to gather: the questionnaires targeted at the team members and the questionnaire targeted at the team leaders. The team members were asked to answer to two different evaluation scales – Team Internal Functioning (IF) and Team Task Interdependence (TTI) – and the team leaders to one scale – Team Performance (TP).

The questionnaires were filled in on a voluntary basis and full anonymity was always preserved throughout the course of the research.

- Research variables

The proposed researched plan thus contemplates, as predictor variables, the dimensions of the work team’s internal functioning, as a criterion variable, team performance and, finally, as a moderator variable, the team’s task interdependence.

- Instruments

For the predictor variable, the work team’s internal functioning, we used Rousseau, Aubé and Savoie’s (2006b) Work Team Internal Functioning scale (IF). This scale has a total of 22 items [12 items related to “interpersonal support” factor (e.g., “we respect each other”), and 10 items to “work management” (e.g., “we organize our work activities”) factor. On this scale, the participants were asked to indicate what happens in their team, using a 5-point Likert scale (from 1=“not true at all” to 5=“completely true”).

For the criterion variable, team performance, we used Rousseau, Aubé and Savoie’s (2006b) Team Performance (TP) scale. This scale has three items covering productivity, work quality and objective accomplishment (e.g., “this team is productive”). The data which are part of this questionnaire come from team leaders who were asked to indicate to what extent they believe that the statements are true, according to a 5-point Likert scale (from 1=“not true at all” to 5=“completely true”).

For the moderating variable, task interdependence, we used Rousseau, Aubé and Savoie’s (2006b) Team task interdependence scale (TTI). This scale presents 3 items which allow the assessment of the way in which the members depend on each other to perform their job (e.g., “for the work of the team, we need the contribution of every member”). The participants were asked to indicate how much they agree with...
the statement, using a 6-point Likert scale (from 1=“completely disagree” to 6=“completely agree”).

All these questionnaires were adapted through the “translate-translate back” (Hill & Hill, 2000) method and validated in Portuguese. Concerning the psychometric qualities of the scales:
- for the IF scale we used an exploratory factor analysis estimated by weighted least squares. We forced a two-dimensional structure, with oblimin rotation. The two factors (interpersonal support and work management) explain 60.59% of the variance. In order to estimate the reliability, we used Cronbach’s alpha. The values were .94 and .90, respectively.
- for the TP scaled, we used principal component analysis, with varimax rotation. The results showed a component responsible for 74.24% of the total variance. Regarding reliability, we found an alpha value of .81.
- for the TTI scale, we used principal component analysis with varimax rotation. The results showed a component responsible for 76.90% of the total variance. Regarding reliability, we found an alpha value of .85.

- Sample

These scales were administered to a sample of 72 work teams (408 members of the team and 66 leaders), with an average of 7 members each (SD=2.87). The teams came from two companies from the services sector (82%) and a company from the industrial sector (18%) from the centre of Portugal.

- Data analysis

Following the procedures of the authors of the original study, the data was analysed with factor analysis (to test the bidimensional Conception of the team’s internal functioning), correlations (to test the relationship between the team’s internal functioning dimensions and effectiveness), as well as hierarchical regression analysis (to test the moderation of task interdependence). When we needed to aggregate the data at the team level (IF and TTI), we used the AD Index (Average Deviation Index) [Burke, Finkelstein & Dusing, 1999; Burke & Dunlap, 2002].

4 RESULTS

The results were partially consistent with those of Rousseau, Aubé and Savoie (2006b).
Hypothesis 1 had empirical support: Our goal was that of verifying if the instrument, when adapted to the Portuguese language, made a bidimensional structure emerge and if that structure matched the one found by Rousseau, Aubé and Savoie. This would give consistency to the work of the aforementioned authors. To this end, we used a factor analysis, namely exploratory factor analysis.

It is relevant to see that, like Rousseau, Aubé and Savoie (2006b), in a first approach, the factor analysis revealed the existence of three factors (based on the criteria of Keiser eigenvalues > 1.0 and in a scree plot analysis). We also verified that it was worth limiting the number of factors to two, since the third factor was clearly spurious, as it only integrated one item.

The 22 items of the scale were then submitted to a factor analysis estimated by weighted least squares. We forced a two-dimensional structure, with oblimin rotation.

with Rousseau, Aubé and Savoie (2006b), the solution showed itself to be interpretable (interpersonal support dimension – factor 1 and the work management dimension – factor 2). The two factors explain 60.59% of the variance of the results. The interpersonal support includes ten items (of the 12 original ones in the IF scale) and the work management dimension integrates six items (of the 10 original). (Table 1).

Concerning reliability, the alpha value for the interpersonal support was .94 and for the work management factor it was .90. The magnitude of the correlations of the items with the full scale pointed towards the presence of a scale with good internal consistency and no items being removed seemed to boost the consistency of the factor in which it was integrated (Table 2). It is relevant to highlight that, in Rousseau, Aubé and Savoie’s (2006b) work, the value of the explained variance was 63.8% and the alpha values for the interpersonal and work management factors were, .93 and .91 respectively.

Thus, we verified that the items which were part of the interpersonal support dimension included specific behaviours related to the relations between people (e.g., we are sensitive to feelings and the well-being of our colleagues), and the items which were part of the work management dimension were related to behaviours directed towards the goals to reach (e.g., we plan our work activities).
Table 1 - Work team’s internal functioning: Factors Loading (FL)

<table>
<thead>
<tr>
<th>Items</th>
<th>FL (Factor 1)</th>
<th>FL (Factor 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) We evaluate the results of our work</td>
<td>.50</td>
<td>.62</td>
</tr>
<tr>
<td>2. We respect each other</td>
<td>.78</td>
<td>.54</td>
</tr>
<tr>
<td>3. We organize our work activities</td>
<td>.63</td>
<td>.83</td>
</tr>
<tr>
<td>4. We openly discuss existing disagreements before they become conflicts</td>
<td>.71</td>
<td>.62</td>
</tr>
<tr>
<td>5. We respect each other’s point of view, even if we have different opinions</td>
<td>.78</td>
<td>.51</td>
</tr>
<tr>
<td>6. We are sensitive to the feelings and well-being of our colleagues</td>
<td>.84</td>
<td>.58</td>
</tr>
<tr>
<td>7. We discuss different opinions in an open and honest way</td>
<td>.78</td>
<td>.60</td>
</tr>
<tr>
<td>8. We establish work deadlines</td>
<td>.57</td>
<td>.71</td>
</tr>
<tr>
<td>10. We plan our work activities step by step</td>
<td>.60</td>
<td>.86</td>
</tr>
<tr>
<td>11. We coordinate the progress of our work activities</td>
<td>.62</td>
<td>.85</td>
</tr>
<tr>
<td>12. We openly approach and manage the conflicts between colleagues</td>
<td>.76</td>
<td>.66</td>
</tr>
<tr>
<td>14. We help each other in our work activities</td>
<td>.79</td>
<td>.62</td>
</tr>
<tr>
<td>17. We make sure we understand well the point of view of our colleagues</td>
<td>.79</td>
<td>.65</td>
</tr>
<tr>
<td>18. We make our colleagues’ work easier</td>
<td>.79</td>
<td>.64</td>
</tr>
<tr>
<td>20. We share useful work information with our colleagues</td>
<td>.73</td>
<td>.63</td>
</tr>
<tr>
<td>21. We evaluate the progress of our work</td>
<td>.58</td>
<td>.72</td>
</tr>
</tbody>
</table>

Correlations
(Factor 1) -- 
(Factor 2) .73 --

Table 2 - Work team’s internal functioning: Values of Cronbach’s alpha and correct item/total correlation

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Items</th>
<th>Mean</th>
<th>Standard deviations</th>
<th>Corrected item/total correlation</th>
<th>Alpha if item deleted</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpersonal Support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>3.84</td>
<td>.946</td>
<td>.738</td>
<td>.932</td>
<td></td>
<td>.938</td>
</tr>
<tr>
<td>4</td>
<td>3.23</td>
<td>.958</td>
<td>.697</td>
<td>.934</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>3.54</td>
<td>.914</td>
<td>.740</td>
<td>.931</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>3.73</td>
<td>.963</td>
<td>.798</td>
<td>.929</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>3.41</td>
<td>.924</td>
<td>.757</td>
<td>.931</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>3.16</td>
<td>.961</td>
<td>.743</td>
<td>.931</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>3.58</td>
<td>.951</td>
<td>.766</td>
<td>.930</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>3.44</td>
<td>.823</td>
<td>.765</td>
<td>.931</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>3.61</td>
<td>.900</td>
<td>.768</td>
<td>.930</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>3.70</td>
<td>.907</td>
<td>.714</td>
<td>.933</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.896</td>
</tr>
<tr>
<td>1</td>
<td>3.67</td>
<td>.846</td>
<td>.600</td>
<td>.895</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3.51</td>
<td>.842</td>
<td>.793</td>
<td>.866</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>3.43</td>
<td>.888</td>
<td>.683</td>
<td>.883</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>3.44</td>
<td>.867</td>
<td>.785</td>
<td>.867</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>3.49</td>
<td>.834</td>
<td>.783</td>
<td>.868</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>3.45</td>
<td>.865</td>
<td>.678</td>
<td>.884</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Hypothesis 2 also found empirical support: following Rousseau, Aubé and Savoie’s (2006b) statistical procedures, we started by analysing the existing correlation between the dimensions of the internal functioning of work teams (interpersonal and work management dimensions). Like Rousseau, Aubé and Savoie (2006b) the interpersonal dimension and the work management dimension were shown to be positively correlated (p < .01) with the team performance (r=.52 and r=.40 respectively), showing a moderate effect (Bryman & Cramer, 1990/1993; Cohen & Holliday, 1982) and explaining, respectively, 27% and 16% of the team performance variance (Table 3).

In Rousseau, Aubé and Savoie’s (2006b) results, the interpersonal support dimension and the work management dimension were positively correlated (p<.05) with the team performance (r=.36 and r=.31) explaining 12.3% and 9.6% respectively of the team performance variance.

Table 3 - Inter-correlations, means and standard deviations of the work team’s internal functioning and the team performance

<table>
<thead>
<tr>
<th></th>
<th>Interpersonal support dimension</th>
<th>Work management dimension</th>
<th>Team performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpersonal support dimension</td>
<td>3.62</td>
<td>.763**</td>
<td>---</td>
</tr>
<tr>
<td>Work management dimension</td>
<td>.519**</td>
<td>3.98**</td>
<td>---</td>
</tr>
<tr>
<td>Team performance</td>
<td>62</td>
<td>62</td>
<td>3.80</td>
</tr>
</tbody>
</table>

N = 62

**p < .01

Hypothesis 3 was not empirically supported: similarly to Rousseau, Aubé and Savoie’s (2006b) procedures, we tested the hypothesis through an hierarchical regression analysis. Team performance was the criterion variable.

Unlike Rousseau, Aubé and Savoie (2006b), the task interdependence did not reveal itself as moderator of the relation between the interpersonal support dimension and the team performance, since it did not introduce significant variance in the dependent variable (ΔR2 = .002, ns). As we can observe in Table 4, in the first step, a predictor variable – interpersonal support dimension – and the moderating variable – task interdependence – were introduced, and, in the second step, the terms which
contain the interactions. The analysis of the first step showed us that, as a whole, the interpersonal support dimension and the task interdependence dimension explained 27.3% of the dependent variable’s variance. The relationship between the interpersonal support dimension and performance was shown to be positive and statistically significant (B = .534, p = .000). Task interdependence did not, however, appear to have a significant impact on the dependent variable (B = -.061, p = .596) The analysis of the terms which contain the interactions, revealed that task interdependence does not moderate the relation between the interpersonal support dimension and team performance. It should be highlighted that, previously, and according to a procedure proposed by Cohen et al. (2003), the predictor variable – interpersonal support – was centred, with the intent of correcting the problems of multicollinearity which might arise when moderating relationships were being analysed.

The results found by Rousseau, Aubé and Savoie (2006b) revealed that task interdependence had a moderating role in the relation between the interpersonal support dimension and team performance (the introduction of the interaction terms in the regression model significantly increased the explained variance by 5%).

**Table 4 - Results of the hierarchical regression analysis with interpersonal support dimension and task interdependence as predictors of team performance**

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>EPB</th>
<th>β</th>
<th>R2</th>
<th>ΔR2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interpersonal support dimension</td>
<td>.743</td>
<td>.159</td>
<td>.534***</td>
<td>.273***</td>
<td>-</td>
</tr>
<tr>
<td>Task Interdependence</td>
<td>-.095</td>
<td>.179</td>
<td>.061</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interpersonal support dimension</td>
<td>1.671</td>
<td>2.182</td>
<td>1.202</td>
<td></td>
<td>.002</td>
</tr>
<tr>
<td>Task Interdependence</td>
<td>-.071</td>
<td>.189</td>
<td>-.046</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Interpersonal support dimension*)</td>
<td>-.174</td>
<td>.409</td>
<td>-.673</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task Interdependence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

***p < .001

**Hypothesis 4 was not empirically supported**: resembling the statistical procedures that Rousseau, Aubé and Savoie (2006b) used in their research, we also tested this hypothesis through an hierarchical regression analysis with team performance as criterion variable.

Contrary to the results found by Rousseau, Aubé and Savoie (2006b), task interdependence also did not moderate the relation between work management and
team performance, since it did not introduce significant dependent variance ($\Delta R^2 = .007, ns$). As we can observe in Table 5, in the first step, the predictor variable – work management dimension – and the moderating variable – task interdependence were introduced, and, in our second step, the terms that contained the interaction were introduced. The analysis of the first step showed us that, together, the work management dimension and interdependence explained 16.2% of the dependent variable’s variance. The relation between work management and performance was revealed as positive and statistically significant ($B = .420, p = .002$). Task interdependence was not revealed, however, to have a significant impact on the dependent variable ($B = -.067, p = .598$). Thus, task interdependence did not have a moderating effect in the relation between the work management dimension and team performance. It should be highlighted that as we did with our hypothesis 3, the predictor variable – work management – was centred, with the goal of correcting eventual multicollinearity problems.

The results found by Rousseau, Aubé and Savoie (2006b) revealed that task interdependence had a moderating role in the relation between the work management dimension and team performance (the introduction of the interaction terms in the regression model significantly increased the percentage of explained variance by 5%).

**Table 5** - Results of the hierarchical regression analysis with the work management dimension and task interdependence as predictors of team performance

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>EPB</th>
<th>$\beta$</th>
<th>$R^2$</th>
<th>$\Delta R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work management dimension</td>
<td>.667</td>
<td>.200</td>
<td>.420**</td>
<td>.162**</td>
<td></td>
</tr>
<tr>
<td>Task interdependence</td>
<td>-.104</td>
<td>.197</td>
<td>-.067</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.169* .007</td>
</tr>
<tr>
<td>Work management dimension</td>
<td>-.1502</td>
<td>3.155</td>
<td>-.946</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task interdependence</td>
<td>-.128</td>
<td>.201</td>
<td>-.082</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Work Management dimension * Task interdependence)</td>
<td>.406</td>
<td>.589</td>
<td>1.373</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05; **p < .01

**5 DISCUSSION AND PERSPECTIVES OF FURTHER RESEARCH**

This study intended to consolidate and broaden our knowledge for a better understanding about the processes of a team’s internal functioning, relevant in the
performance of common tasks. In accordance with Rousseau, Aubé and Savoie (2006b), one would expect, as we showed in the hypotheses of research that we tested, that a) a work team’s internal functioning would be composed by two dimensions (interpersonal support and work management); b) each of the dimensions of work team’s internal functioning would be positively related to the team performance; and c) the higher the task interdependence, the stronger the relationship would be between the team’s internal functioning dimension and the performance, and the higher the task interdependence, the stronger the relation would be between the work management dimension and performance. However, the results allowed us only to support the first and second hypotheses.

The first set of results that should be analysed concern our first goal, which guided the research, and which consisted of empirically testing the bidimensional conception of the work team’s internal functioning. The results we found in this study support the hypothesis formulated, as had happened in the research lead by Rousseau, Aubé and Savoie (2006b). These results allowed us to demonstrate that the classical functions of the behaviour of work team members (expressive and instrumental, or, in other terms, interpersonal support and work management or, moreover, socio-affective/relational and task/technical) constitute the dimensions of work team’s internal functioning, a sociotechnical system. Indeed, the two dimensions which emerge from our analysis allow us to emphasize the tensional system built by the two subsystems – task/work management and affective/interpersonal support – which create a team, give it sense and which, although distinguishable and with their own processes, coexist, are inseparable, dynamic, non-additive and highly interactive (Lourenço, 2002). They also make clear what the conducting thread of all team/work teams research is. As such, a great deal of the research which has been produced about work teams/teams, though using different expressions and vocabulary, focuses on the interactive dynamics between the affective system and the task system [e.g., “relations vs. tasks” (e.g., Fiedler, 1967; Hersey & Blanchard, 1974, 1982); “maintenance vs. goal achievement/performance” (e.g., Cartwright & Zander, 1968); “employee-focused leader vs. production-focused leader” (e.g., Likert, 1967); “expressive function of a group vs. instrumental function of a group” (Bales, 1950); “consideration vs. initiating structure” (e.g., Blake & Mouton, 1964); “solidarity process vs. production process”
is imperative, since the size of the sample might cause bias in moderation studies.

Concerning our second hypothesis, the results showed that the dimensions of interpersonal support and work management are positively related to team performance. These results strengthen the fact that these dimensions (interpersonal support and work management) are complementary and each contributes to the effectiveness of the team. Managing a team – and its effectiveness – is to manage these two tensional, interactive and interdependent poles. The results were particularly interesting because they support the literature which we mentioned in the first hypothesis, which further highlights the relevance of the two dimensions as fundamental in the functioning, dynamics and effectiveness of a team/team. One should also notice that, with respect to the relevance of our results, our data was gathered from different sources – the team members, on one hand, and their leaders, on another – a fact which decreased the bias of the common variance.

Concerning the last hypotheses (hypothesis 3 and hypothesis 4), we verified that, unlike the results found by Rousseau, Aubé and Savoie (2006b), task interdependence was not revealed, in our research, as a moderating effect in the relation between the dimensions of a work team’s internal functioning and team performance. However, the studies about the relation between task interdependence and performance/effectiveness are not fully conclusive, revealing some inconsistencies (e.g., Van der Vegt & Van de Vliert, 2002). If, on the one hand, some authors claim that task interdependence should be a good predictor of performance, on the other hand, there are others who claim that task interdependence has a negative impact on team performance (e.g., Earley & Northcraft, 1989) and even authors who find no effect at all (e.g. John, 1995, Rocha, 2010). The need to keep studying this relation – interdependence and performance – and with bigger samples, is imperative, since the size of the sample might cause bias in moderation studies.

The adaptation of the questionnaires about teams’ internal functioning (IF Questionnaire), task interdependence (TTI Questionnaire) and team performance (TP Questionnaire) to the context of Portuguese teams, as well as the studies about their psychometric qualities is, also, an important output of our work.
Looking at the results we found as relevant, and moreover given that this study used teams/work teams in the organizational context, which greatly increases, the generalization of the results comparative to studies made in laboratory environments, there are, however, some limitations worth mentioning. Our methodology, being of a non-experimental nature, does not allow us to exactly establish the relation between the variables. Another limitation concerns the transversal nature of this study, which does not allow one to account for the dynamic aspect of the variables at stake.

We reaffirm the need to further enrich the developed work, integrating new variables (e.g., team development), using other methods (e.g., confirmatory nature methods, namely concerning the bidimensionality of the team’s internal functioning) and examining the task interdependence through non-perceptive (objective) measures.

REFERENCES


