Decent work is the sum of people’s aspirations in their working lives. This article aims to report the results of a systematically conducted literature review of empirical research concerning decent work. Electronic databases B-On and EBESCO host, using the keywords ‘decent work’ in the ‘title’ and ‘abstract’, yielded 689 citations. After a two-stage application of inclusion and exclusion criteria, 38 articles were retained for analysis. All studies were conducted between 2003 and 2017. The studies focused on work conditions in the case of decent work deficit, those workers not benefiting from decent work conditions, and what is necessary for the existence of decent work. Study samples consisted typically of workers from different sectors and countries. Data collection was mainly by interview or institutional statistical databases and most studies were descriptive and cross-sectional. The results of this review show that empirical research on decent work is grounded in various disciplines and is still in its early stages. Additionally, most studies report decent work deficit and do not cover the whole decent work concept. Medium, low, and very low development countries are under-researched.

Keywords: Decent work; literature review; empirical research
dimensions will be missed and an accurate portrayal will be far from possible.

Regarding unemployment, previous research reported negative effects on social integration and mental health and highlighted the relevance of work for health and well-being (Dollard and Winefield, 2002; Gowen, 2014; McKee-Ryan, Song, Wanberg and Kinicki, 2005; Murphy and Athanasou, 1999; Paul and Moser, 2009; Wanberg, 2012; Wanberg, Kammeyer-Mueller and Shi, 2001). Unemployment is one expression of DW deficit.

Research concerning work-life balance revealed that the interdependence between work, personal life, and family can become synergic and reduce distress (Allen, 2013; Byron, 2005; Eby, Casper, Lockwood, Bordeaux and Brinley, 2005; Greenhaus and Allen, 2014; Greenhaus and Beutell, 1985; Greenhaus, Collins and Shaw, 2003; Kossek, Baltes and Matthews, 2011; Kossek and Ozeki, 1998, 1999). Work-life balance is mainly related to the first objective mentioned, namely the promotion of standards and fundamental principles and rights at work.

Career management research has shown a change in career management and development practices that moved responsibilities from employers to employees, bringing additional pressure on employees while also providing more autonomy and freedom (Baruch, 2006; Baruch and Rosenstein, 1992; Greenhaus, 2003; Greenhaus and Kossek, 2014; Sullivan and Baruch, 2009). Career management is related to employability, which increases the employees' work opportunities. Considering that the Decent Work Agenda (DWA) proposes the promotion of employment creation and income opportunities, this body of career management research is closely related to DW.

Research concerning workers' participation has shown this has an impact on commitment, job satisfaction, trust in managers (Timming, 2012), and productivity (Doucouliagos, 1995). Moreover, it is related to the fourth objective of promoting social dialogue. Therefore, it is at the core of DW, although not carried out under this label.

Research regarding compensation systems revealed these have an impact on work motivation and perceptions of justice (Dulebohn and Werling, 2007; Gerhart and Milkovich, 1992; Judge, Piccolo, Podsakoff, Shaw and Rick, 2010). It is through remuneration that employees access quality of life and justice. Moreover, through compensation workers are rewarded for their efforts when performing their jobs. It is from remuneration that they can reach a worthy standard of living.

Several DW measures were used to operationalize the concept for policy and intervention purposes. These measures were proposed within the fields of politics, economics, and law, at organizational, regional, and national levels, through indicators and indexes. The availability of those measures has resulted in a greater focus on poverty reduction and international alignment with the ILO's development agenda (Ferraro et al., 2016b).

The various measurement instruments have contributed to guiding DW national policies in several countries. However, limitations were pointed out regarding these measures, and authors and politicians faced several obstacles, such as: (a) the different levels of economic, social, political, and national development (Ghai, 2003a; Godfrey, 2003); (b) the different social security systems (Ghai, 2003b); (c) the different labour markets (Godfrey, 2003); (d) the different instruments and sources of each country (Ahmed, 2003; Bescond, Châtaignier and Mehran, 2003; Bonnet, Figueiredo and Standing, 2003); (e) the diversity of working conditions; and (f) the high interdependence between countries (Ferraro, Pais and Dos Santos, 2015). These limitations negatively affect the accuracy of information, on the one hand, making cross-country comparisons difficult (Anker et al., 2002) and, on the other hand, making it difficult to create a single index of Human Development (Anker et al., 2002; Godfrey, 2003). Furthermore, the individual level of analysis is almost absent from the existing measures (Ferraro et al., 2016b). Individual-level analysis complements these measures by considering workers' perceptions about DW in their work context. The WOPP approach makes that unique contribution bringing new knowledge to the understanding of DW. Knowing that a specific DW dimension is rated as high by workers from different countries might not mean that all of them have the same objective conditions, but that they perceive their own conditions in that dimension as high. Cultural aspects and economic conditions in different countries can justify possible differences between objective measures and subjective ones. Accurate knowledge of that possible dissemblance is relevant for theoretical development and for policy makers, practitioners in human resource management and others.

Although some previous research in work, organizational, and personnel psychology has found important results for deeper understanding of the DW concept and its nomological network, the empirical research on the concept as a whole has not been subject to a literature review so far. Considering the concept as a whole allows us to see more accurately the interactions among the various dimensions of DW and relate the DW condition with other constructs that are relevant to people, as mentioned above. Furthermore, the scientific endeavour is both an analytical process that decomposes the components of the phenomena and necessary to integrate the partial findings regarding the components to reach understanding of the phenomena as a whole. The present study intends to fill this gap, producing an overview of the general findings of the empirical studies found in several databases.

**Aim**

The ‘DW’ expression was coined by the ILO, which gives it high legitimacy as the subject of research. The present study aimed to deepen our understanding of the concept through describing the state-of-the-art empirical research on DW (using the label 'DW') from a psychological perspective or related fields.

**Method**

**Literature search**

The studies relevant to this empirical research were identified by comparing the entries from two electronic databases: B-On (Complementary Index, Academic Search Complete, ECONIS, Business Source Complete, MEDLINE, RCAAP, Supplemental Index, Scopus) and the EBSCO host...
Results

Focus and topics
The first of the reviewed studies focusing on DW was published in 2003 (Table 1). Research into DW clearly increased in 2016. The earliest studies on the topic were concerned with DW indicators, human development, and economic growth. We have identified many topics related to DW (Table 2). The studies focused on DW indicators, DWA, DW deficit, human development, economic growth, gender differences, gender equality, employment promotion, tourism employment, immigrants' employment situation, women's employment, self-employment, working conditions, quality of work life, precarious work, good work, national culture, career counselling, global production network, sexual minorities, and quality of working life.

The first instrument to measure DW appeared in 2015; another was published in 2016 and another in 2017. In 2017, DW appears related to very topical themes such as work motivation, psychological capital, sexual discrimination, and quality of working life.

Informants and settings
Study samples are quite diverse (see Table 2). In 10 studies the sample was gathered from statistical data bases of institutional sources. In 17 studies the sample was workers from different professional categories. The groups studied were households and individual workers, clothing industry workers, local authority staff, representatives of employers' associations and workers' unions, street vendors, tourist guides, unionized hotel workers, information and communication technology (ICT) sector employees, industries – private security, agriculture and hospitality – migrant domestic workers, automotive industry, unionized firm workers, knowledge workers, migrant construction labourers, urban workers, employed sexual minority adults, workers from the food and beverage industry, employed adults, and strippers.

Two studies use students as their sample and two studies use as a source of information the ILO, World Health Organization and World Bank data. One study

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of publications</th>
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</thead>
<tbody>
<tr>
<td>2003</td>
<td>2</td>
</tr>
<tr>
<td>2006</td>
<td>1</td>
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<td>2007</td>
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<td>2008</td>
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<td>2009</td>
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<td>2012</td>
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<tr>
<td>2013</td>
<td>1</td>
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<td>2014</td>
<td>3</td>
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<tr>
<td>2015</td>
<td>5</td>
</tr>
<tr>
<td>2016</td>
<td>11</td>
</tr>
<tr>
<td>2017</td>
<td>7</td>
</tr>
<tr>
<td>Studies (order by publication date)</td>
<td>Main research topic</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Ahmed, 2003</td>
<td>Relationship between decent work and human development</td>
</tr>
<tr>
<td>Bescond et al., 2003</td>
<td>Indicators to measure decent work</td>
</tr>
<tr>
<td>Kantor, Rani and Unni, 2006</td>
<td>Decent work deficit among male and female</td>
</tr>
<tr>
<td>Kelkar and Yunxian, 2007</td>
<td>Gender specific features of labour market</td>
</tr>
<tr>
<td>Lawrence, Gil, Fluckiger, Lambert and Werna, 2008</td>
<td>Promoting decent work</td>
</tr>
<tr>
<td>Gil, Lawrence, Fluckiger, Lambert and Werna, 2008</td>
<td>Decent work, local employment</td>
</tr>
<tr>
<td>Saha, 2009</td>
<td>Decent work, working conditions</td>
</tr>
<tr>
<td>Tangian, 2009</td>
<td>Indexing working conditions</td>
</tr>
<tr>
<td>Thore and Tarverdyan, 2009</td>
<td>Quantify ILO objectives and identify policies conducive to DW</td>
</tr>
<tr>
<td>Adhikari, Hirasawa, Takakubo and Pandey, 2012</td>
<td>Decent work and quality of work life</td>
</tr>
<tr>
<td>Pedraza et al., 2012</td>
<td>Immigrants’ employment situation</td>
</tr>
<tr>
<td>Studies (order by publication date)</td>
<td>Main research topic</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Bletsas and Charlesworth, 2013</td>
<td>Gender equality and decent work</td>
</tr>
<tr>
<td>De Beer, Rogerson and Rogerson, 2014</td>
<td>Working conditions</td>
</tr>
<tr>
<td>Edralin, 2014</td>
<td>Precarious work, decent work</td>
</tr>
<tr>
<td>Di Ruggiero et al., 2014</td>
<td>Decent work agenda</td>
</tr>
<tr>
<td>Charlesworth and Macdonald, 2015</td>
<td>Decent work agenda and gender equality</td>
</tr>
<tr>
<td>Di Ruggiero et al., 2015</td>
<td>Conceptualizations of decent work, health, equity</td>
</tr>
<tr>
<td>Mehta, 2015</td>
<td>Women's work and working conditions</td>
</tr>
<tr>
<td>Sehnbruch et al., 2015</td>
<td>Human development and decent work</td>
</tr>
<tr>
<td>Webster et al., 2015</td>
<td>Diagnostic tool for the realization of decent work</td>
</tr>
<tr>
<td>Di Fabio and Bucci, 2016</td>
<td>Green positive guidance and green positive life counselling</td>
</tr>
<tr>
<td>Di Fabio and Kenny, 2016</td>
<td>Decent life and positive self and relational management</td>
</tr>
<tr>
<td>Edralin, 2016</td>
<td>Good work through decent work practices</td>
</tr>
<tr>
<td>Ferraro et al., 2016d</td>
<td>Development of the Decent Work Questionnaire</td>
</tr>
</tbody>
</table>

(Contd.)
<table>
<thead>
<tr>
<th>Studies (order by publication date)</th>
<th>Main research topic</th>
<th>Countries Sample</th>
<th>Design</th>
<th>Data Collection/Sample Analysis Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Islam, Cojocaru, Rahman, Siti-Hajar and Arnakim, 2016</td>
<td>Decent work practice</td>
<td>Singapore and Italy</td>
<td>Cross-sectional; Descriptive</td>
<td>National and international reports and documents including reports published by ILO, IOM, Human Rights Watch, and Human rights organizations. Documental analysis.</td>
</tr>
<tr>
<td>Sandhu, 2016</td>
<td>National culture and decent work</td>
<td>UAE</td>
<td>Cross-sectional; Descriptive</td>
<td>Participant observation method, semi-structured interviews and narrative method: migrant construction labourers: 18 Indian/12 Pakistani/11 Bangladeshi groups or individuals. Cross-cultural analysis.</td>
</tr>
<tr>
<td>Lavagnini and Mennella, 2016</td>
<td>Decent work and human development, capability approach</td>
<td>Italy</td>
<td>Cross-sectional; Case study; Descriptive</td>
<td>Data of ISTAT, INPS, EUROSTAT, OECD, ISFOL. Empirical analysis.</td>
</tr>
<tr>
<td>Pouyaud, 2016</td>
<td>Psychosocial approach to decent work</td>
<td>France</td>
<td>Cross-sectional; Case study</td>
<td>Interview: 1 social worker. Thematic analysis.</td>
</tr>
<tr>
<td>Ribeiro et al., 2016</td>
<td>Decent work and social constructionism</td>
<td>Brazil and Portugal</td>
<td>Cross-sectional; Descriptive</td>
<td>Thematic autobiographical narrative: 20 urban workers. Content analysis.</td>
</tr>
<tr>
<td>Simonova et al., 2016</td>
<td>Decent work principles</td>
<td>Russia</td>
<td>Longitudinal; Descriptive</td>
<td>Data of Federal State Statistics Service and data from Social and Labor Rights Center. Data Analysis.</td>
</tr>
<tr>
<td>Wicaksono and Priyadi, 2016</td>
<td>Decent work in global production network</td>
<td>Indonesia</td>
<td>Cross-sectional; Descriptive</td>
<td>Data of Sakernas (National Labour Survey), BPS. Data analysis.</td>
</tr>
<tr>
<td>Cruz, Hardy and Sanders, 2017</td>
<td>Decent work, self-employment, working conditions</td>
<td>UK</td>
<td>Cross-sectional; Descriptive; Mixed-methods</td>
<td>Interviewer-administered survey: 197 dancers; Interviews: N = 35 dancers, N = 20 people who worked in the industry and owners, N = 20, N = 15 people involved in regulation with roles. Statistical analysis; Content analysis.</td>
</tr>
<tr>
<td>Douglass et al., 2017</td>
<td>Discrimination, decent work</td>
<td>EUA</td>
<td>Cross-sectional; Descriptive-correlational</td>
<td>Decent work scale: 218 employed sexual minority adults. Structural equation modelling.</td>
</tr>
<tr>
<td>Duffy et al., 2017</td>
<td>Decent Work Questionnaire, psychology of working</td>
<td>EUA</td>
<td>Cross-sectional; Descriptive-correlational</td>
<td>Decent work scale: 864 employed adults. Exploratory factor analysis.</td>
</tr>
<tr>
<td>Ferraro et al., 2017</td>
<td>Work motivation and psychological capital</td>
<td>Brazil and Portugal</td>
<td>Cross-sectional; Descriptive-correlational</td>
<td>Decent work questionnaire: 3004 knowledge workers. Structural Equation Modelling analyses.</td>
</tr>
<tr>
<td>Jawando and Adenugba, 2017</td>
<td>Gender differences and decent work</td>
<td>Nigeria (Lagos)</td>
<td>Cross-sectional; Mixed-methods; Descriptive</td>
<td>Questionnaire: 550 workers from the food and beverage industry; Interviews: 16 interviews (5 female workers, 3 male workers, 4 management staff and 4 Union executives). Descriptive analysis; Content analysis.</td>
</tr>
<tr>
<td>Singh, 2017</td>
<td>Decent work agenda</td>
<td>India</td>
<td>Cross-sectional; Descriptive</td>
<td>Data of ASI. Data analysis.</td>
</tr>
<tr>
<td>Yao, Parker, Arrowsmith and Carr, 2017</td>
<td>Decent work and life and quality of working life</td>
<td>New Zealand</td>
<td>Cross-sectional; Descriptive</td>
<td>Narratives: 606 employees. Content analysis.</td>
</tr>
</tbody>
</table>
focuses on policy discourse and reports produced by labour organizations and women’s organizations; one study focuses on national and international reports and documents including reports published by ILO, IOM, Human Rights Watch, and human rights organizations; one study focuses on interviews with key government, employer, union, and civil society stakeholders in Australia, Canada, the Netherlands, and the United Kingdom and relevant policy documents; one study focuses on national policy documents; and one study focuses on parliamentary documents.

The sample size of the qualitative studies ranged from 1 to 606 and in quantitative surveys up to 3004.

In terms of location, twenty-four studies include data from just one country. Six studies include data from a large number of countries (transnational), five studies collected data in two countries, and three operated in global institutions.

**Study method**
Most studies were cross-sectional and either descriptive or and correlational. Three studies are case studies and six are based on mixed methods (see Table 2). The most common method of data collection in the reviewed studies was the interview, used in 13 studies, followed by data, used in 11 studies and the ad-hoc questionnaire used in eight studies. Data were also collected from documents (six studies), literature survey (three studies), narratives (two studies), and participant observation (two studies). Only one study used the focus group for data collection. The Decent Work Questionnaire was used in two studies, one being the instrument’s development. The Decent Work Scale was also used in two studies, one being the instrument’s development. One diagnostic tool of DW was developed.

The most common analysis method was content analysis, used in 13 studies, followed by statistical analysis, used in eight studies, descriptive analysis used in six studies and documental analysis used in five studies. Four studies do not give information about the data analysis method. Two studies use thematic analysis, two studies use discourse analysis, one study uses cross-cultural analysis, one study uses regression analysis and one study uses logistic regression. Two studies use a specific method of analysis (Hans Böckler Foundation method and Data Envelopment analysis).

Most studies (25) are descriptive (Table 3). In four studies DW was related with other variables (Pearson’s r correlations, hierarchical regressions, regression analysis, and logistic analysis). In one study DW is an independent variable, and it is a dependent variable in another.

**Main findings of the reviewed studies**
The descriptive studies found in the literature review used several indicators to describe DW. Some of them refer to countries, and 55 indicators were used in those studies (Table 4). In general, the studies indicate a DW deficit in those countries and the challenges to meet the DW goals.

Concerning sector of activity, the authors used 35 indicators to describe DW (Table 5). In general, they highlight the need to overcome the DW deficit existent in those sectors of activity.

Concerning the studies examining discourse and policy on DW from international organizations and governments, differences were found between institutions. Bletsas and Charlesworth (2013) reported that DW is a contested concept in the sense that the commitment to DW does not always reflect the commitment to gender equality. Di Ruggiero, Cohen and Cole (2014) reported that the pursuit of DW is an important and fundamental goal to promote fair policies, and that the ILO is refining the global policy about work on United Nations agencies.

Later, Di Ruggiero, Cohen, Cole and Forman (2015) reported that DW is a contested notion and that different institutional perspectives are shaping DW in economic, social, and/or health terms.

Kelkar and Yunxian (2007) reported deficits of DW and gender equality in pursuit of inclusive and fair growth and that growth opportunities for men and women depend on the integration of dignity and equality as a crucial factor of the economic environment and institutional conditions.

Charlesworth and Macdonald (2015) reported that developed countries argue that the DWA is more meaningful for developing economies and that this idea may be due to the perceived lack of relevance of the DWA in

<table>
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<th>Table 3: Decent work as variable.</th>
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<tr>
<td><strong>Decent Work</strong></td>
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<tr>
<td><strong>Independent variable</strong></td>
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<tr>
<td><strong>Dependent variable</strong></td>
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<tr>
<td><strong>Descriptive variable</strong></td>
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<tr>
<td><strong>Variable related to others</strong></td>
</tr>
<tr>
<td><strong>Other</strong></td>
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</table>
those developed countries. The challenge in the developed countries is to overcome the minimum standards of work and inclusion of gender for the promotion and gender equality (Charlesworth and Macdonald, 2015).

Sehnbruch, Burchell, Agloni and Piasna (2015) reported that the fundamentals and theoretical development are key factors for the success of DW and human development, because they are factors that facilitate the operationalization of these concepts.

Ribeiro, Silva and Figueiredo (2016) reported that urban workers in Brazil seek work with fair wages, social protection, safety, and personal development opportunities, as recommended by the ILO, but these principles, in contexts of economic vulnerability, come
from the community and not from the State, which creates different forms of DW.

Simonova, Sankova, Mirzabalaeva, Shchipanova and Dorozhkind (2016) analysed existing approaches to the assessment of DW and developed a model which overcomes the DW deficit through structural and institutional changes. In general, since DW is a comprehensive and integrative construct, it allows some appropriation by the different institutions that emphasize the components of the concept (Simonova et al., 2016).

Concerning the scientific fields of research on DW, Pouyaud (2016) reported that the field of vocational psychology deals with the need for a multilevel, psychosocial perspective, taking into account both objective and subjective dimensions of DW, and four levels are highlighted in defining DW: (1) Personal Level (Life Story); (2) The Level of Activity (Work as Concrete Action); (3) Collective Level (Interaction with Peers); and (4) Social Level (Values). In this case study, the author characterizes the extent to which a professional’s practices express the concept of DW.

Regarding development of psychological measures, three instruments were developed (Duffy et al., 2017; Ferraro et al., 2016d; Webster, Budlender and Orkin, 2015). Ferraro et al. (2016d), using a sample of 1675 knowledge workers from Portugal and Brazil, developed the Decent Work Questionnaire, which is a subjective measure covering the full range of substantive elements defined by the ILO. The final 31-item version yields seven factor scores and a global DW score showing very good psychometric properties. The seven subscales are: (a) Fundamental Principles and Values at Work; (b) Appropriate working time and workload; (c) Fulfilling and productive work; (d) Meaningful retribution for the exercise of citizenship; (e) Social protection; (f) Opportunities; and (g) Health and safety.

Duffy et al. (2017), using a sample of 864 adults in the USA, developed a multidimensional measure of DW demonstrating reliable and valid scores and capturing five components of the construct. The final 15-item scale yields five factors/subscales corresponding to the five components of DW: (a) physically and interpersonally safe working conditions, (b) access to health care, (c) adequate compensation, (d) hours that allow for free time and rest, and (e) organizational values that complement family and social values. These authors anchor this instrument on a DW concept which is different from that defined by the ILO.

Webster et al. (2015), using a sample of 1206 workers in South Africa, developed a diagnostic tool based on nine of the indicators identified by the ILO, focusing on individual workers at industry level rather than conditions at country level. Like the Duffy et al. (2017) measure, the full range of DW is not covered by this instrument.

Regarding DW determinants, three studies were found (Ahmed, 2003; Douglass, Velez, Conlin, Duffy and England, 2017; Pedraza, González and Llorente, 2012). Douglass et al. (2017), using the DW concept of the Psychology of Working Theory (PWT; Duffy et al., 2016), found that heterosexist discrimination and social class directly predicted DW. These results, although relevant, reveal what was expected because heterosexist and social class non-discrimination are components of the DW concept as described by the ILO.

Using the composite index of DW deficit (combining indicators of low hourly pay, excessive working hours, unemployment, non-enrolment in school, youth unemployment, male-female gap in labour force participation and old age without a pension) and the Human Development Index in 38 countries, Ahmed (2003) reported that high levels of DW can be achieved without high incomes and that high incomes do not guarantee high levels of DW.

Pedraza et al. (2012) reported that, in a negative economic context, early immigrants to a country are more likely to achieve full-time DW, while those who enter later are more likely to find part-time jobs with a DW deficit.

Concerning the impact of DW, only one study refers to this (Ferraro, Pais, Moreira and Dos Santos, 2017). Using a sample of knowledge workers from Portugal and Brazil, the authors reveal that DW plays an important role in promoting a positive approach to work, and that psychological capital is an important mediating variable in the promotion of autonomous work motivation. Moreover, DW has a relevant role as a predictor of different types of work motivation through PsyCap mediation.

Finally, two studies use the DW just for contextualizing research focused on other variables (Di Fabbio and Bucci, 2016; Di Fabio and Kenny, 2016). Di Fabbio and Bucci (2016) revealed that the connection to nature, on the one hand, is not related to fluid intelligence and, on the other hand, has a moderate relation with the personality traits. Di Fabio and Kenny’s (2016) study provides empirical support for the conceptualization of positive self and relational management (PS and RM) as positive lifelong life-management, positive lifelong self-management, and positive lifelong relational management. The authors seek to identify variables that will allow students to have a decent life and DW. Therefore, the relationship of these last studies reported is very distal.

Discussion

The scarcity of articles reporting empirical studies on DW published so far shows that the subject is still in its early stages of development, mainly in psychology. Furthermore, among these articles just a few address the DW concept as a whole. Most studies consider only some DW components measured by indicators or other measures (Table 6). That is remarkable because one of the merits of this concept is its integrative and comprehensive nature. One of its strengths is its capability to join together dispersed research that has been undertaken in several fields and perspectives for many years (Dos Santos, 2017). Approaching only part of the full concept prevents one of its strongest contributions to knowledge development and policy design and implementation. Only an approach that first considers the concept as a whole gives credence to a more detailed look at one of its dimensions. The DW concept allows us to see the big picture and, through its dimensions, to see the accurate relationships between the different dimensions of the concept. Moreover,
The extant psychological measures of DW were applied in a small number of countries and in a narrow span of worker diversity.

Absence of the effects of different determinants on DW

Absence of research on different impacts of DW

Countries’ diversity is under-researched so far

The study of the nomological network of the DW concept is relevant for knowledge development and practical improvements in the labour field.

The study of the nomological network of the DW concept is relevant for knowledge development and practical improvements in the labour field.

The psychological measurement of DW is useful for knowledge development and practical improvements in the labour field.

The lack of empirical research is further demonstrated by the low number of measures developed (Table 6). Three psychological instruments were developed to measure DW. While Ferraro et al. (2016d) and Webster et al. (2015) used the ILO definition of DW, Duffy et al. (2017) have a more restricted definition of DW. Future research can both verify to what extent the current instruments show adequate psychometric properties in more diverse samples and undertake validation studies in other countries.

Although there are some correlational studies, the explanatory power of the effects of different determinants on DW is also largely absent from the literature (Table 6). The review found reports of some associations, for example, between DW and economic development and human development. The relationship between these concepts is important since the impact of countries' industrialization and income on DW has been reported (Ahmed, 2003; Bescond et al., 2003). However, the current evidence about relationships between concepts is sparse and based on reviews and descriptive and single correlation studies and can only be considered as preliminary evidence. There is also a need for closer examination of the determinants in relation to DW, as these have been found to impact employment situations and may affect the achievement of DW (Pedraza et al., 2012).

Regarding the descriptive component, the studies reviewed here were conducted in countries, using indicators that describe what happens in those countries or in specific groups. Although many different workers have already been studied, that diversity is far from covering the full diversity of the labour market. That is even truer regarding workers’ perspectives on DW. Therefore, research on DW from different worker perspectives is an important topic for future research. With regard to the diversity of countries, studies were made in many different countries where the DW deficit is high.

According to the Human Development Index ranking, 40 of the countries studied show a very high human development (out of 51), 23 are in the category of high

**Table 6: Gaps in the existing DW empirical research.**

<table>
<thead>
<tr>
<th>Gaps</th>
<th>Suggestions</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of integration of research on different subjects that are components of DW</td>
<td>Integrative research is suggested to bring together research on different DW components.</td>
<td>Joining together previous research on DW components allows a deeper understanding of labour-related phenomena.</td>
</tr>
<tr>
<td>Assumption that if a country reports DW deficit that country has a problem</td>
<td>Take into account the interdependence brought by globalization and always approach DW deficits as world problems.</td>
<td>DW deficit, whenever it occurs, is a world DW deficit.</td>
</tr>
<tr>
<td>The extent psychological measures of DW were applied in a small number of countries and in a narrow span of worker diversity.</td>
<td>Validate these instruments in diverse samples (from several countries and including worker diversity).</td>
<td>The psychological measurement of DW is useful for knowledge development and practical improvements in the labour field.</td>
</tr>
<tr>
<td>Absence of the effects of different determinants on DW</td>
<td>Examine the determinants in relation to DW namely in terms of psychological variables more closely.</td>
<td>The study of the nomological network of the DW concept is relevant for knowledge development and practical improvements in the labour field (DW as criterion variable).</td>
</tr>
<tr>
<td>Absence of research on different impacts of DW</td>
<td>Develop studies on the DW impact.</td>
<td>The study of the nomological network of the DW concept is relevant for knowledge development and practical improvements in the labour field (DW as predictor variable).</td>
</tr>
<tr>
<td>Countries’ diversity is under-researched so far</td>
<td>Expand empirical research to different countries worldwide.</td>
<td>DW has some cultural diversity in the way it is expressed, which is relevant to study both for knowledge development and practical improvements.</td>
</tr>
</tbody>
</table>
human development (out of 53), 15 present a medium human development (out of 40), and the last 4 countries (out of 40) are in the category of low human development. Therefore, most countries subject to research are in the very high or high human development levels (Table 6). One possible explanation can be drawn: The countries in those categories are more researched because of their investment in research. Researchers who work in those countries study mainly data from their own countries. They have greater access to data, and research funding policies reinforce their focus on the countries that pay the bill. Moreover, the cultural environment where they live is better known by them than the cultural environments of low and medium human development countries, and they prefer to study what is guaranteed instead of taking risky options. This hypothesis should be tested in further studies and if confirmed should indicate a need for more investment in research in medium and low human development countries. This implication is more pertinent when considering the greater interdependence regarding conditions that lead to the above-mentioned DW deficits. Moreover, in low development countries the DW deficit symptom is expected to be more prominent than in more developed countries. Confirmation of that situation should encourage both researchers and policy makers to undertake research on DW deficit in developing countries.

In addition, the DW deficit seems to be a problem that emerges regardless of the position of the country in the Human Development Index. It seems to be a worldwide symptom as a result of complex interactions between players. Tracking the chains of production and use of products and services worldwide can be relevant in identifying how the DW deficit is caused and provide crucial information for tackling the problem and inspiring paths to solve it. That endeavor should be an important task in future research and intervention.

Since the empirical studies in this review focused on only a few topics related to DW, it is not possible to draw firm conclusions about the main results (Table 6). However, there is some evidence that DW is associated with different types of work motivation through PsyCap mediation and that DW characteristics are highly motivating for workers (Ferraro et al., 2017).

Social science is still taking the first steps in approaching the DW concept as a whole. However, we can say that there is already a long tradition of research in the various components of DW, taken separately, albeit not within the DW field. Further studies should be concerned with the integration of evidence-based knowledge in explaining and managing DW.

Conclusions

In the present work we undertook a literature review of the empirical studies on DW and found that, being a recent concept, the empirical literature is not very extensive. Of the 38 studies analyzed, most are descriptive, covering 82 countries and 17 sectors of activity. Most countries are high or very high in the Human Development Index, which means medium, low, and very low development countries are under-researched. There is a need to broaden the scope of occupations and contexts covered by research in line with the DW agenda.

Additionally, most studies are found not to cover the whole DW concept. Being an integrative concept, this limitation should be addressed in future research. Taking the full range of the concept into account will improve the contribution of the research on DW and its dissemination throughout the world.

Considering that DW is a concept with value per se, future study of its determinants seems to be more relevant than its consequences. These determinants are multiple and their identification will contribute to enriching the nomological network of the concept and mainly to designing interventions to promote DW.

Considering the aforementioned interdependence resulting from globalization, the need to study the roles played by the different stakeholders, whether outside or inside organizations, seems also relevant.

Furthermore, only a few studies were dedicated to the DW impact, but none have considered the impact on the different spheres of workers’ lives (e.g., family, friends) or on society in general. These are also aspects that should be studied in the future.

Three instruments were identified for psychological measurement of DW. Validation of this type of instrument for use in culturally diverse countries would enhance current knowledge and understanding of DW, considering both objective and subjective measures of the concept. Furthermore, despite the difficulties anticipated in applying this type of measure, it will still be relevant to develop and validate a tool focused on the organizational level of analysis. It is remarkable that no research has focused on studying possible differences between cultures or sectors of activity regarding the most relevant dimensions of DW and the least important dimensions at a specific point in time. Further studies can address this topic.

Given that the number of empirical studies on DW is very small, we decided not to consider as exclusion criterion ethical standards or quality. This decision was taken considering that all the studies were published in academic journals with peer review assessment and the assessment of quality and ethical standards was previously undertaken before being accepted for publishing. However, future literature reviews might use additional criteria regarding quality or ethical standards.

The approach presented here is a contribution, among others, that can help to strengthen understanding of the concept and its nomological network. That understanding might help people (e.g., workers, employers, policy makers) to be aware of what they are making of their working lives and, above all, what they can do differently to achieve a better quality of life for themselves and others. The differences between objective measures and subjective perceptions seem to be very important in studying the phenomena related to work and the role it represents for people currently and in the future. Work
as a social institution should always be considered as DW instead of only focusing on performance and outputs, otherwise work seems to be an alienation of the subject. Human resource managers are advised that work design and human resource practices and policies have to be updated taking into account the evolving nature of the DW concept, as highlighted by Ferraro et al. (2015). Those practices and policies that are against any of the DW dimensions are not sustainable and have expected negative consequences. The definition of DW deficits, its measurement, and subsequent intervention have to take into account an appropriate time frame to detect to what extent the DW deficit is just a short and episodic moment or more long-lasting and requires corrective action, as highlighted by Dos Santos et al. (2016).

In general, DW has the potential to become a more relevant concept in research and intervention. That can be true if an effort is made to join the diverse research traditions in several disciplines, thereby contributing to deepening understanding of the concept.

**Ethics and Consent**

This article does not contain any studies with human participants performed by any of the authors.

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**Competing Interests**

Authors contributed equally and significantly to the study and there is no conflict of interest.

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