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Effects of an intervention on the participation of people with disability in the workplace

Efeitos de uma intervenção sobre a participação da pessoa com deficiência no ambiente de trabalho

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Abstract

Current laws and regulations have generated discussions about the accessibility of disabled people in the labor force. However, there is a need for changes in the physical, functional, and attitudinal and/or behavioral environment to create an inclusive environment. The objective of this research was to evaluate the effects of an intervention aimed at a critical reflection on the inclusion of people with disabilities in the workplace. The intervention was carried out in a higher education institution with academic staff and administrators; its effects were evaluated using the Conceptions of Disability Inventory. The results indicated that after having completed the course, the participants developed a broader and more human conception of the participation of people with disabilities in the workplace.

Keywords: Disabled persons; Social inclusion; Work.

Resumo

Normativas legais na atualidade têm promovido discussões sobre a acessibilidade da pessoa com deficiência no contexto laboral. Entretanto, mudanças no ambiente físico, funcional e atitudinal e/ou comportamental são necessárias para que esse ambiente seja de fato inclusivo. Este estudo objetivou avaliar os efeitos de uma intervenção que visou à reflexão crítica sobre a inclusão da pessoa com deficiência no universo do trabalho, realizada com funcionários e gestores de uma instituição de ensino superior. Seus efeitos foram medidos pela aplicação do Inventário de Concepções sobre Deficiência. Os resultados indicaram que, após terem frequentado o curso, os participantes manifestaram concepções mais favoráveis à participação da pessoa com deficiência no trabalho.

Palavras-chave: Pessoas com deficiência; Inclusão social; Trabalho.

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Social inclusion, an issue of great public policy debate that has been widely addressed in legal and educational settings and in the media, can be defined as a set of actions taken by government bodies to promote the inclusion of minority groups and those excluded from decision-making processes that directly or indirectly concern them (Aranha, 2001; Mendes, 2006). The principle of social inclusion recognizes diversity as part of human nature. According to Sassaki (1997), society has the responsibility to provide all its residents with appropriate structural, social, and economic conditions, so that every citizen can exercise their rights and fulfill their obligations, as well as to make the necessary adjustments to meet population demands. Therefore, for a society to become more just and egalitarian, it is necessary to promote the inclusion of people who are excluded from the social process, such as people with disabilities.

In order to promote and regulate the inclusion of disabled people in the workplace, Article VII of the Brazilian Federal Constitution of 1988 establishes the following: “prohibition of any discrimination with respect to wages and hiring criteria of handicapped workers”, and Article XXXVII adds that “the law shall reserve a percentage of public offices and positions for handicapped persons and shall define the criteria for their admittance” (Brasil, 1988). These regulations affirm that people with disabilities have equal rights and employment opportunities.

Decree n° 3298/1999, which regulates Law n° 7853 of 24/10/1989, provides for the “National Policy for the Integration of Disabled People” and establishes the government commitment to provide vocational training for people with disability and to promote opportunities for professional qualifications and inclusion in the labor market (Brasil, 1999). Moreover, according to this decree, the equalization of opportunities for disabled people must be guaranteed so that they have fair access to employment, which can be done either by inclusion or incorporation into the productive system, providing reasonable accommodation and ensuring safe working environment. Article XXXVI introduces a quota whereby private companies with

a workforce of 100 or more are required to set aside 2-5% of their posts for people who have some kind of disability. This article states that companies with up to 200 employees must have 2% of their personnel as disabled workers; companies with 201-500 employees must have 3%; companies with 501-1000 employees must have 4%; and those with more than 1,001 employees must have 5%. With regard to the equalization of opportunities, the legislation establishes a quota of up to 20% of vacancies reserved for people with disabilities in public services (selection through Civil Service Exams).

Although the law and regulations have helped increase employment opportunities for disabled people, their labor market participation is still lower than expected. According to the 2010 Census data released in 2012 by the *Instituto Brasileiro de Geografia e Estatística* (IBGE, Brazilian Institute of Geography and Statistics), 45.6 million Brazilians (23.9% of the total population) reported having at least one type of disability - visual, auditory, physical, or intellectual. Among them, 12.7 million said they have at least one type of severe disability. Disability was classified according to the degree of severity based on the respondent's perception of their own activity limitations. The questions were aimed at identifying visual, auditory, physical, or intellectual disabilities according to the degrees of difficulty reported in the questionnaire developed by the Washington Group on Disability Statistics. Of the total number of people unemployed or economically inactive in the country (75.6 million), the number of individuals with severe disabilities accounted for 31.3% (Instituto Brasileiro de Geografia e Estatística, 2012).

When investigating the possible causes of these findings, some studies addressing the barriers to labor market participation for people with disabilities found that many times this is due to misconceptions about hiring disabled people. These studies reported that such misconceptions arise from the idea that persons with disabilities are unable to work and, consequently, are less productive (Bahia & Schommer, 2010; Carvalho-Freitas, 2007; Copeland, Chan, Bezyak, & Fraser, 2010; Kaye, Jans,

& Jones, 2011; Lino & Cunha, 2008; Nepomuceno & Carvalho-Freitas, 2008; Tanaka, 2007; Violante & Leite, 2011).

Although the law and regulations clearly establish the obligation of companies to take adequate steps to accommodate employees' disabilities (and not the opposite), we often observe attitudinal barriers that prevent them from participating in the workplace. Amaral (1998) argued that attitudinal barriers can be understood as discriminatory behavior or attitudes towards someone, prevailing in interpersonal relationships based on stereotypes or "castes" due to their characteristics.

Therefore, hiring people with disabilities means more than complying with the legislation since it involves making organizational changes, including changes in the conception and attitudes of employers and those who will work with them.

According to Omote (1996), conceptions are ideas developed throughout time and which are not necessarily based on reliable information and rational knowledge, but which can, as in this case, lead to undervaluing people with disabilities and giving justifications for attitudes towards them.

Focusing on social attitudes, Amaral (1994) highlighted that conceptions are favorable or unfavorable psychological or emotional predispositions towards a person, a group of people, objects, or phenomena. The author adds that changes in conception lead to attitudes change.

Historically, having disabilities has been associated with inferiority and inability, fundamental aspects that used to justify the segregation and exclusion of disabled people from mainstream society, especially in the work market. This is largely due to the characteristics that make disabled people different from others; perhaps one of the reasons that have impacted labor market outcomes for persons with disabilities.

Tanaka and Manzini (2005) argue that the lack of information about disability, combined with the supposition that disabled people will not be as productive, may create antagonisms towards their inclusion in the workplace. These authors highlight

that misinformation can lead to misconception about the real inability and limitations of people with disabilities, as well as about their potential, needs, expectations, and feelings, which, in a way, would eventually maintain and confirm the existing discrimination or social prejudice against disabled people.

Moreover, Toldrá, De Marque, and Brunello (2010) state that the lack of knowledge of this disability may lead to prejudice and hinder the participation of people with disability in the workforce. However, these authors highlight that the access to accurate and relevant information can be a powerful instrument for sensitization to social development issues and respect to diversity in the workplace.

Given these considerations, interventions with employees and administrators are necessary to promote actions to encourage critical reflection on conceptions about people with disabilities, thus making the work environment more supportive and accessible to them.

According to the analysis of the literature cited in the present study, it can be said that even though the employment of people with disabilities has been considered an alternative to overcome their historical exclusion, there is still plenty of misconceptions about disability in organizations. These misconceptions are based on the idea of focusing more on the limitations than on the abilities that these individuals may have if they are provided with proper accommodation and working conditions.

Accordingly, there is a need for investments in actions that can overcome misconceptions about the employment of people with disability in order to gain respect and appreciation of human diversity to protect their rights. Government and private organizations should recognize that meeting the disability employment quota is not an act of benevolence from employers, but rather the right of individuals that need employment protection regulations to have access and remain in the labor force.

Therefore, the objective of this research was to evaluate the effects of an intervention aimed at

a critical reflection on the inclusion of people with disabilities in the labor force. The intervention was carried out with academic staff members and administrators in a public university in the state of *São Paulo*, Brazil.

Method

Participants

Thirteen academic staff and administrative staff members in three different colleges of a public university located in the state of *São Paulo*, Brazil, participated in the present study. Of the 13 participants, 9 were females and 4 males (in the age range of 26-58 years), who worked in the coordination and management of administrative services in different sections of the university. Their duties included provision of secretarial and administrative services and assistance to undergraduate and graduate students, faculty members, and the other university community members.

The inclusion criteria for participation in this study were as follows: academic staff and administrative staff members who had attended at least 80% of the training course "Sensitization to the Inclusion of People with Disabilities in the workplace", which is described and discussed further below.

Instruments

The Conceptions of Disability Inventory (Carvalho-Freitas, 2007) was used. This instrument includes closed-ended questions and a six-point Likert-type scale: 1) strongly disagree; 2) disagree; 3) somewhat disagree; 4) somewhat agree; 5) agree; 6) strongly agree to avoid using extreme response categories (central tendency bias).

The inventory consists of 22 items grouped into seven major factor items (Spiritual; Normality; Inclusion; Performance; Benefits; Engagement; and Training). This instrument enables the assessment of the respondents' conceptions of disability in the

workplace, as follows: 1) Spiritual factor: disability seen as a spiritual manifestation of divine will. In our society, disabled people are looked upon as objects of charity and pity and deserving of segregation; 2) Normality factor: disability seen as a dysfunctional deviation from normality; perception of disabled persons as "abnormal" and those who need treatment and cure in order to be included; therefore, disabled people are placed in specific sectors in the workplace, based on their disability, with uncertainties regarding their adaptation, which breed fears, such as fear of accidents that may involve other people; 3) Inclusion factor: conception of disability is based on assumptions of inclusion of disabled people; social rights are seen as essential to promote the social inclusion of people with disabilities and to emphasize the need to make workplace arrangements with appropriate physical and psychosocial working conditions to accommodate this special group of people; 4) Performance factor: conceptions of disability are based on performance criteria, focusing on the respondents' perception regarding the performance, productivity, and quality of work of persons with disabilities, as well as the competitiveness of the organization after their inclusion in the workforce; 5) Benefit factor: conceptions of disability are based on benefits of hiring people with disabilities, i.e., the respondents' perceptions regarding the effect that hiring disabled workers has on the company's image from the perspective of employees and customers, which can improve the organization's work environment; 6) Engagement factor: conceptions of disability are based on the engagement of disabled workers in their work, i.e., the level of commitment they have to the organization. Disability conceptions are therefore based on how the respondents see the engagement, commitment, and job stability of people with disabilities; 7) Training factor: conceptions of disability are based on training needs, i.e., respondents' perception about the training needs of employees and administrative staff regarding the inclusion of people with disabilities (Carvalho-Freitas, 2007).

This instrument does not have a minimum score requirement. The results of each one of the

seven factor items are analyzed; therefore, it is possible to investigate whether the respondents agree or disagree with each factor.

Procedures

This study presents the results of an intervention approved by the Research Ethics Committee of the *Faculdade De Ciências de Bauru, Universidade Estadual Paulista* (School of Sciences of Bauru, São Paulo State University), Protocol nº 11815/46/01/11.

The intervention consisted of the training course “Sensitization to the Inclusion of People with Disabilities in the workplace”, which aimed at a critical reflection on the following issues: diversity, disability, inclusion, and employment of people with disabilities. This course was based on a continuous training program for educators, a useful didactic and methodological approach to change conceptions and attitudes towards people with disabilities, proposed by Omote, Oliveira, Baleotti, and Martins (2005). This training program was adapted; changes in the content were made and relevant texts were included focusing on issues related to the employment of disabled people. The Sensitization training course consisted of five sessions promoting critical thinking through group discussions between the instructor and the participants. The course was designed based on the following goals: Session 1: encourage participants to share their perceptions of disability; Session 2: discuss the concept of disability; Session 3: reflect on how the participants acknowledge differences; Session 4: discuss the general inclusion principles and the creation of an inclusive culture; and Session 5: discuss the legislation covering the inclusion of people with disabilities in the workplace. The group sessions were held once a week for 5 successive weeks (each session lasting 90 minutes) at the university during working hours, and the employees were released to attend the course. This training course was proposed in a Master’s degree study conducted at the *São Paulo State University* (Graduate Program in Psychology). The researcher has a Bachelor’s Degree in Psychology.

The purpose of the training course was to lead the participants to reexamine their views and attitudes towards people with disabilities. It is worth mentioning that none of the participants had attended disability-related training courses, and they had not had previous close contact with people with disabilities either in the professional sphere or the family sphere.

The effects of this intervention were evaluated using the Conceptions of Disability Inventory (Carvalho-Freitas, 2007), which was applied before and after the participants attended the training course. The results were analyzed following the criteria proposed by the author of the instrument (Carvalho-Freitas, 2007). The factor items assessed were analyzed individually based on the total and the mean scores obtained before and after the intervention; the answers with mean scores between 1.0 and 3.5 indicated disagreement with the factor item assessed, and those in the range 3.6 to 6.0 indicated agreement.

In order to identify significant changes in the participants’ conceptions based on the instrument answers before and after the intervention, the Wilcoxon signed-rank test and the software Statistical Package for Social Sciences version 22.0 were used to determine statistically significant differences. Statistical analysis was performed comparing the scores of each one of the 7 factor items before and after the intervention; differences were considered statistically significant when $p \leq 0.05$.

Results and Discussion

With regard to the Spiritual Factor, Table 1 shows that before the intervention twelve participants indicated disagreement, among which six (P3, P4, P7, P8, P9, and P10) indicated strong disagreement. The only participant that indicated agreement before the intervention, P12, had the minimum agreement score (mean of 3.6).

All participants indicated disagreement with the Spiritual Factor after the intervention, behavior that became stronger among them; although there

Table 1
Pre-and post-intervention scores using the Conceptions of Disability Inventory

Factor			P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	
Spiritual	Total	Pre-	7	10	3	3	10	8	3	3	3	3	10	11	7	$p = 0.203$
		Post-intervention	3	9	3	3	8	6	3	3	3	3	3	8	8	
	Mean	Pre-	2.3	3.3	1	1	3.3	2.6	1	1	1	1	3.3	3.6	2.3	
		Post-intervention	1	3	1	1	2.6	2	1	1	1	1	1	2.6	2.6	
Normality	Total	Pre-	17	25	8	15	15	11	19	20	14	25	16	19	15	$p = 0.012$
		Post-intervention	8	18	15	13	13	9	14	11	13	11	12	15	13	
	Mean	Pre-	3.4	5	1.6	3	3.0	2.2	3.8	4.0	2.8	5.0	3.2	3.8	3	
		Post-intervention	1.6	3.6	3	2.6	2.6	1.8	2.8	2.2	2.6	2.2	2.4	3.0	2.6	
Inclusion	Total	Pre-	12	6	6	10	5	8	10	12	10	12	10	6	6	$p = 0.832$
		Post-intervention	12	8	10	10	8	10	10	12	10	8	10	8	6	
	Mean	Pre-	6	3	3	5	2.5	4	5	6	5	6	5	3	3	
		Post-intervention	6	4	5	5	4	5	5	6	5	4	5	4	3	
Performance	Total	Pre-	5	17	9	9	5	5	10	13	7	5	5	12	6	$p = 0.361$
		Post-intervention	5	14	5	12	10	5	5	5	7	5	5	13	5	
	Mean	Pre-	1	3.4	1.8	1.8	1	1	2	2.6	1.4	1	1	2.4	1.2	
		Post-intervention	1	2.8	1	2.4	2	1	1	1	1.4	1	1	2.6	1	
Benefits	Total	Pre-	10	8	9	11	9	10	10	8	10	12	6	10	10	$p = 0.234$
		Post-intervention	2	7	9	11	7	10	10	10	8	6	11	7	11	
	Mean	Pre-	5	4	3	5.5	4.5	5	5	4	5	6	3	5	5	
		Post-intervention	1	3.5	3	5.5	3.5	5	5	5	4	3	5.5	3.5	5.5	
Engagement and commitment	Total	Pre-	7	12	6	13	10	9	15	11	13	8	11	14	13	$p = 0.79$
		Post-intervention	3	8	10	13	10	9	11	8	8	7	14	10	11	
	Mean	Pre-	2.3	4	2	4.3	3.3	3	5	3.6	4.3	2.6	3.6	4.6	4.3	
		Post-intervention	1	2.6	3.3	4.3	3.3	3	3.6	2.6	2.6	2.3	4.6	3.3	3.6	
Training	Total	Pre-	11	11	11	6	10	10	10	12	12	12	12	12	10	$p = 0.053$
		Post-intervention	9	10	12	8	10	8	10	2	7	4	9	10	12	
	Mean	Pre-	5.5	5.5	5.5	3	5	5	5	6	6	6	6	6	5	
		Post-intervention	4.5	5	6	4	5	4	5	1	3.5	2	4.5	5	6	

was no statistical significance, six participants (P1, P2, P5, P6, P11, and P12) had lower mean scores after the intervention, and among them two participants (P1 and P11) indicated strong disagreement and one (P12) changed his answer from agreement to disagreement with this item factor.

According to Carvalho-Freitas (2009), this is a positive result since a high response frequency of agreement with this factor may indicate emotion of pity and/or an act of benevolent sympathy towards disabled people. These attitudes make it difficult for administrative staff and to evaluate the

performance of these persons and can hinder workplace interpersonal relationships. The administrators and coworkers seek metaphysical explanations for possible differences in treatment in attitudes towards workers with and without disabilities. In other words, the spiritual conception of disability can contribute to the exclusion of many capable and productive people from social life due to beliefs and prejudices against a particular population group; such is the case of people with disabilities.

As for the Normality Factor, it was observed that before the intervention, five participants (P2,

P7, P8, P10, and P12) indicated agreement. However, this result changed after the intervention and only one participant (P2) maintained agreement (score changed from 5.0 to 3.6). It is worth mentioning that the post-intervention scores corresponded to the lowest agreement ratings.

The changes in the answers regarding the Normality Factor were statistically significant ($p = 0.012$) in comparison with the overall scores before and after the intervention. In general, it was observed that after the intervention, the participants indicated disagreement with conceptions of disability as dysfunctional deviation from normality that can have a serious impact on the workplace such as: negative attitudes (that cause embarrassing situations), accidents, misplacement of work disabled workers, and interpersonal relationship problems.

Changing views about disability is very important because, according to the author of the instrument (Carvalho-Freitas, 2007), the agreement with the Normality Factor may imply that people with disabilities should have specific job positions in the company, i.e., they should have specific duties based on their alleged disability. This, according to Omote (1996), can result from the fact that society sees that the difficulties of disabled people are mostly due to organic limitations. Therefore, the inclusion of people with disabilities in the workplace is frequently based on their type of disability rather than on the real job opportunities or their needs. Consequently, people with disabilities have been hired to perform easier jobs that require little professional qualification or informal jobs. Accordingly, there seems to be inadequate placement of people with disabilities because some employers believe that disabilities limit workers to perform specific job functions (Tanaka & Manzini, 2005).

With regard to the Inclusion Factor, eight participants (P1, P4, P6, P7, P8, P9, P10, and P11) indicated agreement, with mean scores ranging between 4.0 and 6.0, both before and after the intervention. However, some of them changed their answers; five participants (P2, P3, P5, P12, and P13) indicated disagreement before the intervention,

with mean scores ranging from 2.5 to 3.0. After the intervention, four of them (P2, P3, P5, and P12) indicated agreement, and participant P13 maintained disagreement.

These results are good and similar to those of Carvalho-Freitas (2007), who found that the majority of participants agreed with the Inclusion Factor, even before the intervention. This result was expected because the inclusion of disabled people has been widely recognized and reported in the mass media as a positive societal attitude, and the conceptions about inclusion have been frequently discussed. The answers given by the participants regarding the Inclusion Factor indicate the need for workplace accommodations and adjustments to ensure access to all employees. They may also indicate an inclusive organizational culture. Carvalho-Freitas (2007), the author of the instrument used in the present study, believes that a high response frequency of agreement with this factor item indicates a positive perception regarding work opportunities for people with disabilities and awareness of the need for adequate working conditions and tools.

As for the Performance Factor, it was observed that all participants indicated disagreement before the intervention; five participants (P1, P5, P6, P10, and P11) indicated strong disagreement, with a mean score of 1.0. The mean score of the other participants ranged from 1.2 to 3.4, indicating that even after the intervention, there was disagreement with this factor item.

The results of this research corroborate those of Carvalho-Freitas (2007), who found that most participants indicated disagreement with this factor item. The author of the instrument believes that the Performance Factor focuses on people's perception regarding the performance, productivity, and quality of work of persons with disabilities and their impact on the competitiveness of the company. High scores indicate a negative perception about the performance and quality of work performed by individuals with disabilities. Therefore, it can be said that the participants in the present study had a positive perception of the work performance of disabled people since they indicated disagreement

with this factor before and after the intervention, i.e., they did not agree that the quality of work performed by workers with disabilities is lower than that of other workers.

Nevertheless, discordant results were found in studies conducted with employees and administrative staff in companies without disabled workers (Fraser et al., 2010; Kaye et al., 2011; Tanaka & Manzini, 2005; Toldrá et al., 2010). These studies used different assessment instruments and reported a high response frequency of disagreement regarding the evaluation of the performance of individuals with disabilities in the workplace. The participants in these studies did not believe in the potential of persons with disabilities, seeing them as less qualified and/or less productive than people who do not have disabilities, as well as inept and dependent individuals and thus unable to learn and perform certain job duties.

With regard to the Benefits Factor, before the intervention, 11 participants (P1, P2, P4, P5, P6, P7, P8, P9, P10, P12, and P13) had mean scores ranging from 4.0 to 6.0, indicating agreement; only two participants indicated disagreement. After the intervention, six participants (P1, P3, P5, P10, and P12) had mean scores that indicated disagreement and seven participants indicated agreement, which shows mixed results.

According to the author of the instrument (Carvalho-Freitas, 2007), the agreement with the Benefits Factor may imply that companies can benefit from hiring persons with disabilities, especially in terms of the individuals' perception regarding the impact that hiring people with disabilities has on the company's image from the perspective of employees and customers, improving the organization's work environment.

However, the results obtained in the present study, which showed differing views of participants before and after the intervention, corroborate the results of Nepomuceno and Carvalho-Freitas (2008), who also found mixed results regarding this factor item since some participants agreed or strongly agreed that hiring people with disabilities enhances the image and improves work environment, while others rated "somewhat agree"

or "disagree". It is noteworthy that even after the training course some participants indicated disagreement with this factor item. During the course, the working conditions of persons with disabilities was widely discussed, highlighting that disabled workers should be provided with equal opportunities as others (qualification, accommodations, and other requirements) and that companies should hire disabled employees for reasons other than the benefits it can bring to the public image of the company. However, these approaches are adopted by some companies only to meet the imposed disability employment quota, without ensuring the effective participation of people with disabilities in their workforce.

As for the Engagement and Commitment Factor, it was observed that both before and after the intervention five participants (P1, P3, P5, P6, and P10) indicated disagreement. Before the intervention, eight participants (P2, P4, P7, P8, P9, P11, P12, and P13) indicated agreement, and after the intervention, the answers of four of them changed indicating that they disagreed with this factor item. The other four participants maintained their answers indicating agreement. Nevertheless, there were no statistically significant differences in the scores before and after the intervention.

The Engagement Factor focuses on the perception of people regarding the commitment and job stability of disabled people. According to Carvalho-Freitas (2007), high scores indicate a more positive perception about the commitment and job stability of workers with disabilities. Nambu (2003) argues that there is a myth that people with disabilities are more committed and have more stable jobs than people without disabilities. The author adds that any worker, either disabled or not disabled, will be more or less committed depending on the working conditions provided, such as training, recognition, functional abilities, and career prospects.

The disagreement indicated by the participants after completing the training course may be due to the idea that a disabled person should always be treated like everyone else, including the

workplace. In other words, regardless of their disability, disabled workers may have goals, aspirations, concepts, and attitudes that may not be adequate for the company needs.

With regard to the Training Factor, it was observed that before the intervention, almost all participants (except P4) had mean scores ranging from 5.0 to 6.0, indicating agreement with this factor item. After the intervention, nine participants maintained agreement. However, after the intervention, the mean scores of the answers of three participants (P8, P9, and P10) demonstrated changes regarding the statements in this factor item. Another change was observed in the views of the participant P4, who changed from disagreement to agreement.

Based on these results, it was observed that both before and after the training course most of the participants agreed with this factor item. Moreover, the author of the instrument, Carvalho-Freitas (2007), argues that high scores indicate the training needs of employees and administrators regarding the inclusion of disabled people in the organization.

The findings confirm the need to provide employees and administrative staff with training about the employment of disabled people because misinformation can lead to negative attitudes in the workplace towards people with disabilities overvaluing their condition, which in turn may lead to misconception undermining their productivity and confirming the existing social prejudice against disabled people (Fraser et al., 2010; Kaye et al., 2011; Tanaka & Manzini, 2005; Toldrá et al., 2010).

However, during the training course it was observed that certain disabilities require workplace adjustments to ensure that disabled workers can perform the tasks of their job efficiently; otherwise it would only confirm the provision of inadequate and adverse working conditions. It is necessary to expand people's narrow conceptions about disability to view it as a multi-determined social phenomenon in light of a specific population (Aranha, 2003; Omote, 1996, 2004). Such considerations may have influenced the low agreement of most participants with the Training Factor.

Final Considerations

The results obtained show that a critical-reflexive intervention can be a viable methodological procedure to produce changes in the conceptions and social attitudes of employees and administrative staff towards the participation of people with disabilities in the workplace. The Conceptions of Disability Inventory (Carvalho-Freitas, 2007) was applied before and after the proposed intervention to investigate and compare the conceptions of the participants about disabled people.

It is important to mention that before the intervention some participants shared positive conceptions regarding the inclusion of people with disabilities in the workplace, but to a lesser extent. Post-intervention analysis showed stronger tendency to positive broader conceptions, as shown by the high disagreement rate indicated by the participants in the Normality Factor, which investigates whether disability is seen as a dysfunctional deviation from normality and can have serious impacts on the workplace such as: negative attitudes (that cause embarrassing situations), accidents, misplacement of work disabled workers, and interpersonal relationship problems (Carvalho-Freitas, 2007).

The overall findings indicate that by developing more positive conceptions about hiring disabled people, the participants in this study gained a clearer perception of employment opportunities for people with disabilities associated with the need for adequate working conditions and tools. They were able to see disability not only as an individual manifestation; they started considering the environment as essential for the occurrence (or not) of the labor inclusion process. The results obtained showed the possibility of changing conceptions and social attitudes towards the employment of people with disabilities by using a reflexive intervention that consisted of a short training course aimed at a critical reflection of this topic.

Therefore, it can be said that, in general, the reflexive intervention carried out promoted a more realistic view of the possible limitations and real abilities of persons with disabilities. In addition,

it increased and broadened the participants' understanding of the need for support, workplace adaptations and adjustments, and compliance with laws and regulations related to the employment of people with disabilities.

Finally, it is worth highlighting that the presence of a psychologist to provide professional assistance during the process of inclusion of individuals with disabilities in the workforce is essential. Psychologists are fully trained to work with intervention groups and are well able to critically discuss issues and situations that could lead to prejudice and discriminatory attitudes towards disadvantaged and socially excluded groups.

Contributors

All authors contributed to the conception and design of the study, data analysis and final editing.

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