




Cross-cultural adaptation of Indicators of Integration scorecard to the Brazilian Portuguese language

Adaptação transcultural para o português brasileiro do instrumento *Indicators of Integration Scorecard*

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RESUMO | Introdução: Para realizar intervenções efetivas, reduzir os riscos no trabalho e promover a saúde e o bem-estar dos trabalhadores, é necessária uma abordagem ampla que avalie, documente e discuta a aplicação dos ativos de saúde no ambiente laboral, estabelecendo esforços efetivos, por meio de programas e iniciativas que sustentem e melhorem a saúde e a segurança dos trabalhadores. **Objetivos:** Adaptar transculturalmente o *Indicators of Integration Scorecard* (IIS) para o português brasileiro, de modo a permitir sua utilização no Brasil e oportunizar às empresas avaliar a integração de programas, políticas e práticas relacionadas à saúde e ao bem-estar dos trabalhadores. **Métodos:** A adaptação seguiu recomendações científicas de estudos similares, respeitando seis etapas: tradução; reconciliação das traduções; retrotradução para o idioma de origem; revisão da versão em português por uma equipe interna de especialistas; pré-teste por meio de sua aplicação a um Comitê de *Experts*; e revisão final. **Resultados:** Os procedimentos metodológicos utilizados viabilizaram um instrumento adequado para a autoavaliação das empresas quanto à integração de seus programas e práticas de saúde e bem-estar dos trabalhadores, mantendo as qualidades propostas na versão original. **Conclusões:** A versão em português brasileiro do IIS, agora intitulada Indicadores Integrados de Práticas de Saúde na Organização (IIPSO), obtida no presente estudo, é adequada para a aplicação e a mensuração da implementação e da integração das ações de saúde, segurança e bem-estar nos diversos ambientes de trabalho.

PALAVRAS-CHAVE | tradução; saúde do trabalhador; condições de trabalho; inquéritos e questionários.

ABSTRACT | Background: Broad-encompassing approaches to the evaluation, documentation and discussion of workplace health assets are needed to implement effective interventions and promote health and well-being among workers through effective efforts in programs and initiatives to maintain and improve workplace health and safety. **Objective:** To perform the cross-cultural adaptation of the Indicators of Integration (II) scorecard to the Brazilian Portuguese language to enable its use in Brazil and thus provide organizations a means to evaluate the integration of workers' health and well-being programs, policies and practices. **Methods:** We followed scientific recommendations described in previous studies and carried out the process of adaptation along six steps: translation, reconciliation of translations, back translation into the original language, revision of the Portuguese version by an internal expert committee, pretest with an expert panel, and final review. **Results:** The methods applied resulted in an adequate instrument for self-evaluation of the integration of workers' health and well-being programs and practices in organizations; the adapted version conserves the properties of the original. **Conclusion:** The Brazilian version of the II scorecard — entitled *Indicadores Integrados de Práticas de Saúde na Organização* (IIPSO) — obtained in the present study is appropriate to be administered and to measure the implementation and integration of health, safety and well-being actions.

Keywords | translating; occupational health; working conditions; surveys and questionnaires.

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INTRODUCTION

Although there is a direct and explicit relationship between health, safety and well-being at work, some employers still approach these subjects separately. Nevertheless, an increasing number of organizations from different economic sectors have begun implementing integrated health promotion actions. These shift indicates that adequate management requires balancing the employees' needs for such actions to reflect on organizational outcomes¹⁻³.

Efficient managers seek to create work environments likely to promote productivity and professional accomplishment, motivation and pleasure among employees, as well as satisfaction in their relationships with supervisors, coworkers and clients, while also taking into account the impacts of the work environment and context on the well-being of workers^{4,5}.

To eliminate or control hazards, organizations formulate and implement actions to improve health and safety at work and promote the employees' well-being, with emphasis on periodic medical examinations and monitoring environmental and physical hazards⁶. Within this context, they apply means to measure, evaluate and follow up the impacts of such actions in terms of health demands, safety and well-being at work, at the same time they seek to integrate policies, programs and practices which combine hazard control and measures to promote health and well-being at work⁷.

Harvard School of Public Health stands out as a developer of instruments to support the implementation of strategies to reduce or eliminate occupational hazards and promote health at work in an integrated manner, based on evaluations, records and discussions of health assets and efforts to ensure that programs will maintain and improve the health of workers⁸.

The Indicators of Integration (II) scorecard evidences how organizations have applied — or might apply — workplace health and safety actions and policies into practice. This instrument was developed to serve as a guide in the discussion and evaluation of implemented practices to enable employers and employees develop efficient programs to maintain and improve the health of workers. An objective analysis of the ongoing situation enables actors to identify aspects needing attention and corresponding potentialities, in addition to providing support to decision making.

In this article we describe the conceptual model and methods used to perform the cross-cultural adaptation of the II scorecard and make its Brazilian version available, to contribute to spread its use in health research and management in Brazilian organizations.

METHODS

To facilitate the understanding of the process, we first describe the instrument structure and working. II scorecard comprises 23 items distributed across four sections:

1. Organizational leadership and commitment;
2. Coordination between health protection and health promotion;
3. Supportive organizational policies and practices;
4. Comprehensive program content;

Section "Supportive organizational policies and practices" comprises four subsections:

1. Processes for accountability and training;
2. Coordinated management and employee engagement strategies;
3. Benefits and incentives to support workplace health promotion and protection;
4. Integrate evaluation and surveillance.

Each item is scored on a scale ranging from 0 to 2, which respectively correspond to responses 'absent,' 'partially adopted' and 'fully achieved;,' the total score ranges from 0 to 23.

The II scorecard was designed having in mind experts charged of evaluating the performance and integration of well-being, health and safety at work programs in organizations. Such experts represent several fields, including the ones of the participants in the various committees and work groups who contributed to the process of cross-cultural adaptation described next.

In compliance with international recommendations, the cross-cultural adaptation of the II scorecard to the Brazilian Portuguese language was carried out along six steps, to wit: translation, reconciliation of translations, back translation into the original language, revision of the Portuguese version by an internal expert committee, pretest with an expert committee, and final revision⁹⁻¹¹.

For this purpose, the National Association of Occupational Medicine (Associação Nacional de Medicina do Trabalho–ANAMT) established a partnership with Harvard T.H. Chan School of Public Health and Well-being and obtained formal authorization to perform the cross-cultural adaptation of the original instrument. Ethical clearance was waived, because the study did not require collecting data from the participants, but we exclusively analyzed the adequacy of the cross-cultural adaptation of the II scorecard.

The process proper began once this authorization was granted. Two translators independently translated the II scorecard into the Brazilian Portuguese language. These translators were native Portuguese speakers, received orientation on the study aims and were requested to ensure semantic, idiomatic, experiential and conceptual equivalence. The translators did not have any contact with each other during this step, which result was II scorecard Portuguese versions 01 and 02.

These two versions were delivered to the project scientific coordinator to reconcile them into a single one to reduce the odds of bias. The result was a Portuguese version 03, which was delivered to two bilingual translators, who independently performed back translation into the original language. These translators were fluent English speakers — a Scottish nurse with experience in mental health, and a Brazilian psychologist with proven English proficiency — who had not participated in the earlier steps of the study and were oriented to perform a literal translation of the version received (version 03)¹².

The three Portuguese versions, the two back-translations and the original version were delivered to an internal expert committee — composed of five psychology, social work and administration experts with acknowledged experience in occupational psychology, occupational health and instrument validation — which analyzed the compatibility between back-translations and the original instrument. Changes were made to improve the adequacy of Portuguese version 03 as a function of the particularities of the target population¹³.

The result was a fourth Portuguese version of the II scorecard, which was pretested with an expert panel composed of 20 professionals (personnel managers, lawyers, managers, psychologists, labor appellate judges, occupational nurses, psychiatrists, university professors and social workers).

Supervised by the project scientific coordinator, the panel members were requested to name items and statements with problems in their formulation, were difficult to understand or somehow conflicted with the legislation in force in Brazil, g thus likely to interfere with the assessment of the measured construct.

The recommendations made by the expert panel were referred to the internal expert committee for review, and the ones accepted were considered in the translated version. This inclusion of suggestions rated valid allowed adjusting statements difficult to understand or with problems in their formulation without causing any change in their meaning.

A final revision, including typographic and grammatical aspects, was performed by the project investigators to rule out any flaw in the final Brazilian version of the II scorecard. This step resulted in a fifth version of the scorecard, now renamed *Indicadores Integrados de Práticas de Saúde na Organização* (IIPSO–Integrated Indicators of Health Practices at Organizations). This is the adapted and semantically adequate version of the II scorecard for use in Brazil.

RESULTS

DEVELOPMENT OF THE VERSION TO BE ADMINISTERED TO THE EXPERT PANEL

To ensure the adequacy of the Brazilian version of the II scorecard, the project investigators conducted a systematic process in compliance with acknowledged international standards for semantic, idiomatic and conceptual instrument adaptation^{14,15}.

The first two versions were the result of the initial translation of the original instrument into Portuguese. These versions were rated similar but for a few variations in the interpretation of some terms, which did not change the meaning of the corresponding statements (e.g., “top management” was translated as “*alta gestão*” and “*alta diretoria*”; “senior leadership” as “*alta liderança*” and “*liderança senior*,” etc.).

The project scientific coordinator reconciled versions 01 and 02 into a single one. Given the similarity between these two versions, the decisions on the terms to be selected were

made on a case-by-case basis considering the adequacy of the suggested expressions to the target population.

The internal expert committee reviewed the reconciled version and suggested some changes to ensure equivalence between the translated and original items.

For instance, in the section on supportive organizational policies and practices, the sentence “Program managers responsible for worksite wellness and occupational safety and health are trained to coordinate and implement programs, practices and policies for both worksite wellness and occupational safety and health” was stated in the reconciled version as: “Os gerentes de programa responsáveis pela saúde, bem-estar e segurança ocupacional são treinados para coordenar e implementar programas, práticas e políticas tanto para o bem-estar no local de trabalho quanto para saúde e segurança ocupacional.” Following the revision by the internal expert committee, this sentence was restated as: “Os gerentes de programa responsáveis pela saúde, bem-estar e segurança ocupacional são treinados para coordenar e implantar programas, práticas e políticas para o bem-estar, saúde e segurança no trabalho.”

In the same subsection, the sentence “Job descriptions for staff responsible for worksite wellness and occupational health and safety include roles and responsibilities that require interdepartmental collaboration and coordination of worksite wellness and occupational safety and health programs, policies and practices” was stated during the step of reconciliation as “As descrições do trabalho para a equipe responsável pela saúde, bem-estar e segurança ocupacional incluem papéis e responsabilidades que requerem colaboração interdepartamental e coordenação do bem-estar no trabalho com programas, políticas e práticas de saúde e segurança ocupacional.” Following the revision by the internal expert committee, this sentence was restated as “As descrições do trabalho para a equipe responsável pelo bem-estar, saúde e segurança no trabalho incluem papéis e responsabilidades que requerem colaboração interdepartamental e coordenação do bem-estar no trabalho com programas, políticas e práticas de saúde e segurança.”

Similar changes were made into other items, and thus 18/23 statements were reworded.

The results of the revision performed by the internal expert committee are described in Tables 1, 2 and 3. The equivalence between the revised and the original versions is also

shown in these tables, where translations and original statements are presented side by side.

EXPERIMENTAL ADMINISTRATION TO THE EXPERT PANEL

Once the fourth Brazilian version of the II scorecard was obtained, its adequacy for the target population was tested through administration to an expert panel. Panel members were personnel assistants, university professors and psychologists (15% each), social workers (10%), a lawyer, a human resource analyst, a personnel department assistant, a human development coordinator, a labor appellate judge, a company director, an occupational nurse, a physical therapist and an administrative supervisor (5% each). Most panel members were female (65%), self-reported whites (90%), had attended graduate education (80%) and reported to have full-time jobs (90%) at large (70%) for-profit (45%) organizations. The panel members worked for organizations in the following sectors: education (50%), administration and complementary services (15%), human health and social work (15%), scientific and technical professional activities (5%) and other services (5%).

Upon being inquired on benefits relevant to occupational health and well-being, the participants reported their employers provided paid health insurance (80%), health education (80%), employee service contacts (53%), health-supportive physical and social environments (40%) and periodical evaluation with appropriate follow-up and treatment (70%), in addition to health promotion actions integrated into the organizational culture (25%).

The panel experts received a short explanation about the study aims and methods. They were instructed to respond the fourth Brazilian version of the II scorecard and identify statements difficult to understand, with problems in their formulation or which conflicted with the Brazilian legislation in force.

The participants required about 35 minutes to respond and analyze the instrument. Next the study coordinator led the participants in item-by-item analysis to ensure comprehensibility and record suggestions for changes. The panel members suggested some changes to improve comprehension and adjust statements to the Brazilian legislation. Accepted suggestions

are described in Table 1, together with the progression of the process of cross-cultural adaptation, given that the table includes side by side:

1. the original version;

2. the version administered to the expert panel;
3. the final version, including the experts contributions to improve comprehensibility and ensure compliance with the Brazilian legislation in force.

Table 1. Original and adjusted versions of the Indicators of Integration scorecard following internal expert committee and expert panel revision (sections #1 and 2).

	Original version	Internal committee (4th Portuguese version)	Expert panel (5th Portuguese version)
Organizational leadership and commitment	1. Top management expresses its commitment to a workplace culture and environment that supports employee health.	<i>1. A alta gerência expressa o seu comprometimento com uma cultura e ambiente no local de trabalho que apoia a saúde dos trabalhadores.</i>	<i>1. A alta gerência expressa o seu comprometimento com uma cultura e ambiente de trabalho que apoia a saúde dos trabalhadores.</i>
	2. Both worker and worksite health are included as part of the organization's mission.	<i>2. Tanto a saúde do trabalhador como a do local de trabalho são incluídas como parte da missão organizacional.</i>	<i>2. Tanto a saúde do trabalhador como a do ambiente de trabalho são incluídas como parte da missão organizacional.</i>
	3. Senior leadership allocates adequate human and financial resources to implement programs to promote and protect worker health.	<i>3. A alta liderança aloca recursos humanos e financeiros adequados para implementar programas de promoção e proteção à saúde dos trabalhadores.</i>	<i>3. A alta liderança aloca pessoas e recursos financeiros adequados para implementar programas de promoção e proteção à saúde dos trabalhadores.</i>
Coordination between health protection and health promotion	4. Decision making about policies, programs and practices related to worker health is coordinated across departments, including those responsible for occupational safety and health and those responsible for worksite wellness.	<i>4. A tomada de decisões sobre políticas, programas e práticas relacionadas à saúde dos trabalhadores é coordenada pelos departamentos, incluindo aqueles responsáveis pela saúde, bem-estar e segurança no local de trabalho.</i>	<i>4. A tomada de decisões sobre políticas, programas e práticas relacionadas à saúde dos trabalhadores é coordenada pelos departamentos, incluindo aqueles responsáveis pela saúde, bem-estar e segurança no local de trabalho.</i>
	5. Processes are in place to coordinate and leverage interdepartmental budgets allocated toward both worksite wellness and occupational safety and health.	<i>5. Os processos existem para coordenar e alavancar os orçamentos interdepartamentais alocados tanto para a saúde, como para o bem-estar e segurança ocupacional.</i>	<i>5. Existem processos para coordenar e alavancar os orçamentos interdepartamentais alocados tanto para a saúde, como para o bem-estar e segurança.</i>
	6. Efforts to promote and protect worker health include both policies about the work organization and environment, and education and programs for individual workers.	<i>6. Os esforços para promover e proteger a saúde dos trabalhadores incluem tanto políticas sobre o trabalho e o ambiente organizacional, quanto educação e programas para os trabalhadores, individualmente.</i>	<i>6. Os esforços para promover e proteger a saúde dos trabalhadores incluem tanto políticas sobre o trabalho e o ambiente organizacional, quanto educação e programas para os trabalhadores, individualmente.</i>

Table 2. Original and adjusted versions of the Indicators of Integration scorecard following internal expert committee and expert panel revision (section #3).

		Original version	Internal committee (4th Portuguese version)	Expert panel (5th Portuguese version)
Supportive organizational policies and practices	Processes for accountability and training	7. Program managers responsible for worksite wellness and occupational safety and health are trained to coordinate and implement programs, practices and policies for both worksite wellness and occupational safety and health.	<i>7. Os gerentes de programa responsáveis pela saúde, bem-estar e segurança ocupacional são treinados para coordenar e implantar programas, práticas e políticas para o bem-estar no local de trabalho, saúde e segurança ocupacional.</i>	<i>7. Os gerentes de programa responsáveis pela saúde, bem-estar e segurança ocupacional são treinados para coordenar e implantar programas, práticas e políticas para o bem-estar, saúde e segurança no trabalho.</i>
		8. Operations managers are trained to ensure employee health through coordination with and support for occupational safety and health and worksite wellness.	<i>8. Os gerentes de operação são treinados para garantir a saúde dos trabalhadores por meio da coordenação e apoio à saúde, bem-estar e segurança ocupacional.</i>	<i>8. Os gerentes de operação são treinados para garantir a saúde dos trabalhadores por meio da coordenação e apoio ao bem-estar, saúde e segurança no trabalho.</i>
		9. Job descriptions for staff responsible for worksite wellness and occupational health and safety include roles and responsibilities that require interdepartmental collaboration and coordination of worksite wellness and occupational safety and health programs, policies, and practices.	<i>9. As descrições do trabalho para a equipe responsável pela saúde, bem-estar e segurança ocupacional incluem papéis e responsabilidades que requerem colaboração interdepartamental e coordenação do bem-estar no trabalho com programas, políticas e práticas de saúde e segurança ocupacional.</i>	<i>9. As descrições do trabalho para a equipe responsável pelo bem-estar, saúde e segurança no trabalho incluem papéis e responsabilidades que requerem colaboração interdepartamental e coordenação do bem-estar no trabalho com programas, políticas e práticas de saúde e segurança.</i>
		10. Performance metrics for those responsible for worksite wellness and occupational safety and health include success with interdepartmental collaboration and coordination of worksite wellness and occupational safety and health programs, policies, and practices.	<i>10. Os indicadores de desempenho para os responsáveis pela saúde, bem-estar e segurança ocupacional incluem o sucesso na colaboração interdepartamental e a coordenação do bem-estar no trabalho com programas, políticas e práticas de saúde e segurança ocupacional.</i>	<i>10. Os indicadores de desempenho para os responsáveis pelo bem-estar, saúde e segurança no trabalho incluem o sucesso na colaboração interdepartamental e a coordenação do bem-estar no trabalho com programas, políticas e práticas de saúde e segurança.</i>
		11. Professional development strategies include training and setting goals at performance reviews related to interdepartmental collaboration and coordination of worksite wellness and occupational safety and health programs, policies, and practices.	<i>11. Estratégias de desenvolvimento profissional incluem o treinamento e definição de metas nas avaliações de desempenho relacionadas à colaboração interdepartamental e a coordenação do bem-estar no trabalho com programas, políticas e práticas de saúde e segurança ocupacional.</i>	<i>11. Estratégias de desenvolvimento profissional incluem o treinamento e definição de metas nas avaliações de desempenho relacionadas à colaboração interdepartamental e a coordenação do bem-estar no trabalho com programas, políticas e práticas de saúde e segurança.</i>

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Table 2. Continuation.

	Original version	Internal committee (4th Portuguese version)	Expert panel (5th Portuguese version)
	12. Worksite wellness and occupational safety and health vendors have the experience and expertise to coordinate with and/or deliver approaches that support the coordination and collaboration of workplace wellness and occupational safety and health efforts.	<i>12. Os fornecedores de produtos/serviços de bem-estar no local de trabalho, saúde e segurança ocupacional têm experiência e competência para coordenar e/ou apresentar abordagens que apoiem a coordenação e a colaboração do bem-estar no local de trabalho com os esforços relacionados à saúde e segurança ocupacional.</i>	<i>12. Os fornecedores de produtos/serviços de bem-estar, saúde e segurança no trabalho têm experiência e competência para coordenar e/ou apresentar abordagens que apoiem a coordenação e procedam ao compartilhamento de recursos relacionados ao bem-estar, saúde e segurança.</i>
	13. Both managers and employees are engaged in decision-making about priorities for coordinated worksite wellness and occupational safety and health programs, policies, and practices.	<i>13. Gestores e trabalhadores estão engajados na tomada de decisão sobre prioridades para coordenar o bem-estar no local de trabalho com programas, políticas e práticas de saúde e segurança ocupacional.</i>	<i>13. Gestores e trabalhadores estão engajados na tomada de decisão sobre prioridades para coordenar programas, políticas e práticas de bem-estar, saúde e segurança no trabalho.</i>
Supportive organizational policies and practices	Coordinated management and employee engagement strategies	14. Joint worker-management committees addressing worker and worksite health reflect both worksite wellness and occupational safety and health.	14. <i>As comissões de trabalhadores-gestores que abordam a saúde do trabalhador e do local de trabalho refletem o bem-estar no trabalho, a segurança e saúde ocupacional.</i>
		15. <i>Workers are actively engaged in planning and implementing worksite wellness and occupational safety and health programs and policies.</i>	15. <i>Os trabalhadores estão ativamente engajados no planejamento e implantação dos programas e políticas de saúde, bem-estar e segurança ocupacional.</i>
		15. <i>Workers are actively engaged in planning and implementing worksite wellness and occupational safety and health programs and policies.</i>	15. <i>Os trabalhadores estão ativamente engajados no planejamento e implantação dos programas e políticas de bem-estar, saúde e segurança no trabalho.</i>
	Benefits and incentives to support workplace health promotion and protection	16. Incentives are offered to employees to complete activities to stay healthy (e.g. attend a training on health/safety), reduce their high risk behavior (e.g. quit smoking), and/or practice healthy lifestyles (e.g. gym membership discounts).	16. <i>Incentivos são oferecidos aos trabalhadores para realizar atividades que os mantenham saudáveis (ex.: participar de treinamento em saúde/segurança), reduzir comportamentos de alto risco (ex.: parar de fumar) e/ou praticarem estilos de vida saudáveis (ex.: descontos em mensalidades de academias de ginástica).</i>
		16. <i>Incentivos são oferecidos aos trabalhadores para realizar atividades que os mantenham saudáveis (ex.: participar de treinamento em saúde/segurança), reduzir seus comportamentos de alto risco (ex.: parar de fumar) e/ou praticar estilos de vida saudáveis (ex.: descontos em academias de ginástica).</i>	

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Table 2. Continuation.

	Original version	Internal committee (4th Portuguese version)	Expert panel (5th Portuguese version)
	17. Incentives are offered to managers who protect and promote health (e.g. accomplish health and safety in their departments and encourage reporting of hazards, illnesses, and injuries, and near misses; lead and encourage their employees in health promotion and protection efforts).	<i>17. Incentivos são oferecidos aos gerentes que protegem e promovem saúde (ex.: efetivam saúde e segurança em seus departamentos e encorajam os relatos de riscos, doenças, danos e quase-acidentes; lideram e encorajam seus trabalhadores nos esforços de promoção e proteção da saúde).</i>	<i>17. Incentivos são oferecidos aos gerentes que protegem e promovem saúde (ex.: efetivam saúde e segurança em seus departamentos e encorajam os relatos de riscos, doenças, danos e quase-acidentes; lideram e encorajam seus trabalhadores nos esforços de promoção e proteção da saúde).</i>
	18. Workplace benefits exist that address health, safety, and well-being (e.g., health care coverage, flex-time, paid sick leave, screening and prevention coverage, wellness opportunities).	<i>18. Existem benefícios no ambiente de trabalho voltados para saúde, segurança e bem-estar (ex.: plano de saúde, jornada de trabalho flexível, oportunidades de bem-estar).</i>	<i>18. Existem benefícios no ambiente de trabalho voltados para bem-estar, saúde e segurança (ex.: plano de saúde, jornada de trabalho flexível, oportunidades de bem-estar).</i>
	19. The effects of worksite wellness and occupational safety and health programs are monitored jointly.	<i>19. Os efeitos dos programas de saúde, bem-estar e segurança ocupacional são monitorados conjuntamente.</i>	<i>19. Os efeitos dos programas de bem-estar, saúde e segurança no trabalho são monitorados conjuntamente.</i>
Integrated evaluation and surveillance	20. Data related to employee health outcomes are integrated within a coordinated system.	<i>20. Os dados relativos à saúde dos trabalhadores são integrados em um sistema coordenado.</i>	<i>20. Os dados relativos à saúde dos trabalhadores são integrados em um sistema coordenado.</i>
	21. High-level indicator reports (e.g., “dashboards”) on integrated programs are presented to upper level management on a regular basis, while protecting employee confidentiality.	<i>21. Os relatórios dos indicadores relevantes sobre programas integrados são apresentados à alta diretoria regularmente, protegendo a confidencialidade dos trabalhadores.</i>	<i>21. Os relatórios dos indicadores relevantes sobre programas integrados são apresentados à alta diretoria regularmente, protegendo a confidencialidade dos trabalhadores.</i>

No statement was eliminated, and only item #17 triggered considerable discussion in regard to the term “near misses,” which was translated as “*quase acidente*,” a concept seldom used in Brazil, but which consideration should be encouraged.

Expression “worksite wellness and occupational safety and health” was translated in all the corresponding statements

as “*programas de bem-estar, saúde e segurança no trabalho*,” which represents more accurately the legal situation and common use in Brazil.

The expert panel suggested several minor changes to adequate statements to the terms commonly used by the target population, which are shown in Table 1.

A similar procedure, yielding also similar results, was applied to the translation and cross-cultural adaptation of the instructions and response scale. Once the full procedure was concluded, the modified version was renamed IIPSO, which, following cross-cultural adaptation, is the version considered semantically appropriate for use in Brazil.

DISCUSSION

Adapting instruments is a complex task that requires complying with international protocols likely to ensure the quality of the work done to guarantee equity in assessment and comparability between the results obtained with original and adapted versions in different countries and cultures^{16,17}.

Structured instruments for assessment of workplace health and safety are highly relevant for the development of science and to improve organizational practices

designed to boost the quality of life and well-being of workers^{13,16}. The present study, for having performed the cross-cultural adaptation of the II scorecard to the Brazilian Portuguese language, represents a significant contribution to this field of studies. With it we provide employers and occupational health and safety experts an instrument aligned to the demands and latest studies in this field.

We carefully complied with all the required procedures — translation, reconciliation, back translation, revision by internal expert committee, expert panel evaluation, and final revision by the project investigators — to ensure the quality of the final Portuguese version of the II scorecard, according to internationally acknowledged recommendations for cross-cultural adaptation of instruments, with the same structure as the original scorecard^{11,14,15}.

The steps of translation, reconciliation and back translation, together with the independent work of the participating translators, enabled a detailed analysis of possible

Table 3. Original and adjusted versions of the Indicators of Integration scorecard following internal expert committee and expert panel revision (section #4).

	Original version	Internal committee (4th Portuguese version)	Expert panel (5th Portuguese version)
Comprehensive program content	22. The content of educational programs, such as classes, online courses or webinars, or toolbox talks, addresses potential additive or synergistic risks posed by exposures on the job and risk-related behaviors.	22. O conteúdo dos programas educacionais, tais como: aulas, cursos, palestras online e mediações são voltados para riscos potenciais aditivos ou sinérgicos decorrentes de exposições e comportamentos no trabalho.	22. O conteúdo dos programas educacionais, tais como: aulas, cursos, palestras online e mediações são voltados para riscos potenciais aditivos ou sinérgicos decorrentes de exposições e comportamentos de risco no trabalho.
	23. The content of educational programs, such as classes, online courses or webinars, or toolbox talks, acknowledges the impact of job experiences and the work environment on successful health behavior change.	23. O conteúdo dos programas educacionais, tais como aulas, cursos, palestras online e mediações reconhecem o impacto das experiências e do ambiente de trabalho para as mudanças bem-sucedidas do comportamento em saúde.	23. O conteúdo dos programas educacionais, tais como aulas, cursos, palestras online e mediações reconhecem o impacto das experiências e do ambiente de trabalho para mudanças bem-sucedidas do comportamento em saúde.

options to solve divergences. The work performed by the internal expert committee and the expert panel members, who have large experience in occupational health and safety, enabled a better alignment of the statements' wording to the target population of users, including aspects related to Brazilian regulations and legislation. Therefore, the work of both groups of experts contributed to ensure the quality of the semantic validity of the adapted instrument.

We emphasize the fact that with this we are making available an instrument that will enable diagnoses to improve existing practices to contribute to the development of safer and healthier work environments in Brazilian organizations.

One significant limitation of the present study derives from the sampling method (convenience) and the sample representativeness. These shortcomings notwithstanding, the methods used provided the robustness required to ensure the adapted version has the same psychometric properties as those of the original instrument.

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CONCLUSION

IIPSO, the Brazilian version of the II scorecard obtained in the present study, is adequate to be administered and to measure the implementation and integration of health, safety and well-being actions in different work environments. On these grounds, we suggest administering and conducting further studies to verify the psychometric properties and effectiveness of IIPSO, as well as to revise integrated workplace health and safety systems.

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