Galaz Sayen, J.N.; Cid-Yagüe, L.; Martínez-de-Haro, V. (2022) Postural Hygiene Program in Workshops for People with Intellectual Disabilities. Revista Internacional de Medicina y Ciencias de la Actividad Física y el Deporte vol. 22 (86) pp. 363-381 Http://cdeporte.rediris.es/revista/revista86/artprograma1350.htm
DOI: https://doi.org/10.15366/rimcafd2022.86.011

ORIGINAL

POSTURAL HYGIENE PROGRAM IN WORKSHOPS FOR PEOPLE WITH INTELLECTUAL DISABILITIES

PROGRAMA DE HIGIENE POSTURAL EN TALLERES PARA PERSONAS CON DISCAPACIDAD INTELECTUAL

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Código UNESCO / UNESCO CODE: 2411.99 Otras (Actividad Física y Salud) / Others (Physical Activity and Health)
Clasificación del Consejo de Europa / European Council Classification: 17 Otras (Actividad Física y Salud) / Others (Physical Activity and Health)

Recibido 17 de marzo de 2020 **Received** March 17, 2020
Aceptado 18 de febrero de 2021 **Accepted** February 18, 2021

ABSTRACT

This paper presents an intervention proposal for people with intellectual disabilities who work in carpentry and bookbinding workshops in an occupational centre, aiming at the prevention of injuries and/or musculoskeletal disorders that may originate from the participants' workload and work routine. For this, an annual program was designed, the main point of which is the application of workplace exercise routines, based on the features and needs of people with intellectual disabilities. The program consists of six phases, which are: gathering of background information, training and introduction of the activities, performance of the sessions, assessment of the process, biannual and final assessments, and, finally, completion of the program. One of the main features of the proposal is its

feasibility, since it does not require major adaptations or further investments than those that already exist.

KEY WORDS: intellectual disability, occupational centre, workplace exercise, risks prevention.

RESUMEN

En este trabajo se presenta una propuesta de intervención para personas con discapacidad intelectual que trabajan en talleres de carpintería y encuadernación de un centro ocupacional, cuya finalidad es la prevención de las lesiones y/o alteraciones musculoesqueléticas que se puedan originar a partir de la carga y rutina laboral de los usuarios. Para esto, se diseñó un programa de carácter anual, cuyo eje principal es la aplicación de rutinas de gimnasia laboral, basado en las características y necesidades de los usuarios con discapacidad intelectual. El programa consta de seis fases que son: recopilación de antecedentes, formación y presentación de las actividades, desarrollo de las sesiones, evaluación del proceso, evaluaciones semestral y final, y, por último, finalización del programa. Una de las características principales de la propuesta es su factibilidad, ya que no requiere que se lleven a cabo mayores adaptaciones o que se realicen más inversiones de las que ya existen.

PALABRAS CLAVE: discapacidad intelectual, centro ocupacional, gimnasia laboral, prevención de riesgos.

1. INTRODUCTION

This section includes various concepts that will help us contextualise and back up the design of the proposal. First, some definitions related to the evolution of the term intellectual disability, next, certain aspects that are characteristic of the most recurrent diagnoses of the people who participate in the workshops, such as autism spectrum disorders associated with intellectual disability and Down Syndrome. Then, we will address some issues related to occupational risks associated with carpentry and bookbinding, and strategies aimed at the prevention of musculoskeletal disorders. Finally, we will review the precedents related to the concepts of postural hygiene and workplace exercise.

The concept of intellectual disability has evolved over the years. Formerly, terms such as mental deficiency or mental retardation were used, between the 60s and 90s in Spain expressions such as subnormality and mental handicap were used (Verdugo Alonso & Schalock, 2010). Fortunately, the concept and the way of understanding intellectual disability has evolved, including social and adaptive aspects. Currently, the American Association of Intellectual and Developmental Disabilities offers the following definition (AAIDD, 2011).

> "Intellectual disability is characterised by significant limitations in both intellectual functioning and in adaptive behavior, manifested in conceptual, social, and practical adaptive skills. This disability originates before the age of 18".

Currently, intellectual disability is described from a multidimensional approach, focused on the interaction of the person with the environment, developing mainly under three concepts: socio-ecological model, multifactorial approach to etiology and the distinction between an operational definition and a constitutive one. The socio-ecological model makes reference to the way an intellectual disability can cause certain limitations in the interaction with the social context. The multifactorial approach takes the perspective from etiology, identifying prenatal, perinatal and postnatal factors in order to explain the cause of intellectual disability. And, finally, the operational definition sets the limits of the concept, establishing what belongs to it and what does not, while the constitutive definition defines the concept from a multidimensional point of view and in interactive relation with other constructs.

According to the Law 31/1995, on the prevention of occupational risks, occupational risk is understood as "the possibility that a worker could sustain a certain work-related injury". To qualify a risk from the point of view of its seriousness, the probability of occurrence and its severity should be jointly assessed (31/1995).

According to Cortés (2007), the working environment is made up of psychological and social factors, in addition to the physical and technical features of each different task. This author also subdivides the working environment into: organic

environment, psychological environment and social environment, from which various risk factors derive that can affect the health of the worker, such as work accidents and occupational diseases.

Among the aspects that concern this study, we will focus on those that mainly affect the musculoskeletal system, without neglecting the psychological and social, such as fatigue, anxiety and stress, among others. According to the background information collected, among the risks associated with carpentry and bookbinding (graphic arts), we can mention: the prevalence of tendinitis in the upper extremities, pain in the different segments of the spine, contractures and fatigue, derived mainly from repetitive and extended work, the maintenance of inadequate postures, prolonged standing and/or sitting and the handling of loads. Among the most frequent prevention measures, we find changing position and taking pauses within the working day (INVASSAT, 2014; Instituto Regional de Seguridad y Salud en el Trabajo / Regional Institute of Safety and Health at Work, 2013).

At the beginning of the collection of information about postural hygiene, we found several concepts that were reiterated in the articles, most of them related to the position and alterations of the spine. Postural habits, standing, sitting, lumbalgia and neck pain, were some of the most recurrent terms in this part of the study.

As regards the term postural hygiene, in the study by Ortuño et al. (1999), various definitions associated with this concept are found, understanding postural hygiene as a set of strategies or rules that help us adopt or retrain our body posture with the aim of minimising musculoskeletal disorders that can result from improper or vicious postures. This author also points out that postural hygiene is composed of two factors; postural habits and external factors.

Another recurrent aspect in this study was the postural hygiene programs focused mainly on school children, the review carried out by Martínez-González et al. (2008), analysed interventions carried out between 1984 and 2007. Among the most repetitive aspects of these programs stands out the division of the sessions into three different phases: introduction, demonstration and repetition. However, despite the effectiveness demonstrated by the programs, no consensus was reached on the content that should be included in them. Some interventions contained aspects such as theoretical lectures or learning and practical exercises on how to move, lift and hold objects, other interventions analysed aspects of daily life, some of them including a combination of theoretical and practical aspects, as well as physical exercise routines.

In addition to the aforementioned, the role assumed by the physical education teacher in relation to prevention and for the development of postural hygiene programs stands out (Martínez de Haro, 2001), emphasizing the importance of the involvement of the teachers and the students' families in this kind of training, taking into account that the postural habits are acquired and developed inside and outside educational centres. Regarding the contents and work methodologies, it has been

observed that the interventions include criteria such as relaxation techniques and breathing exercises, connection between physical exercise and theoretical aspects of postural hygiene, implementation of Pilates for the improvement of strength and flexibility, and programs with water-based activities (Chacón-Borrego, Ubago-Jimenez, La Guardia García, Padial Ruz, & Cepero González 2018).

The aforementioned studies evince the effectiveness of postural hygiene programs for school children and that the acquisition of healthy habits during this stage would act as a preventive factor of possible injuries that could appear in adulthood. However, so far we have not found any studies on its implementation and efficacy in adults with intellectual disabilities.

As happened with the concepts related to postural hygiene, no specific and scientifically supported definitions have been found about workplace exercise programs, nor references to studies focusing on adults with intellectual disabilities. Therefore, the background research had to be broadened in order to include the general population. Among the studies found related to this topic, reference is made to a set of physical exercises carried out within the working day, aimed at preventing or reducing musculoskeletal disorders derived from the performance of repetitive movements, prolonged postures and / or the movement of objects among others.

In a program designed for dental students, aimed at reducing cervical pain of the participants by means of daily exercise routines, it was observed that after six months, the students reported feeling lesser pain than at the beginning. In addition to exercise routines based on stretching and consciousness-raising, the program also included informative speeches. The routines were performed daily and were distributed in 5 minute interventions throughout the day. Although the study proved to be effective regarding the objectives, the authors suggested a greater use of strategies aimed at increasing adherence to the program (Gonzáles Muente, Meneses-Espejo, Gonzáles Lozano, & Mayta -Tristan, 2014).

Likewise, other references have been found evincing that the application of postural hygiene programs implies the increase in the resting heart rate of the participants, also observing an improvement in factors related to the quality of life of the workers. Other studies have also demonstrated that these programs could contribute to the increase in frequency of the practice of physical activities carried out by workers who have participated in these interventions (Curiacos de Almeida Leme & Curiacos Meyer, 2008; Díaz Martínez, Mardones Hernández, Mena Bastias, Rebolledo Carreño & Castillo Retamal, 2011).

However, from the background information gathered, it has not been possible to find a pattern in terms of structure, types of exercises and frequency of sessions. Most studies refer to an approximate duration of the intervention of 15 minutes, and the exercises mentioned include breathing, consciousness-raising, stretching and mobility.

The general objective of the proposal is to prevent the development of injuries and musculoskeletal disorders derived from workload and routine, by means of the application of a program of workplace exercises.

Among the specific objectives we can mention:

- Increase body awareness and self-care of participants and teachers, by the performance of workplace exercise routines.
- Promote a healthy lifestyle with the practice of physical activities within working hours.
- Increase the participants and teachers' knowledge of exercises, recognising the objectives and the practical applications of each one of them.
- Promote the correct execution of the exercises autonomously.
- Offer a place to rest from the work routine, physically, psychologically and emotionally.

2. METHODOLOGY

2.1 Participants

The features and diagnoses of the participants in the workshops of the occupational centre are confidential. We obtained the information verbally by the person in charge of the centre, who mentioned that the groups are made up of people with autism spectrum disorders, Down syndrome and personality disorders, all of them associated with intellectual disability. In many cases, the diagnosis of intellectual disability is of an unknown origin, especially regarding older people.

Currently, the carpentry group is made up of twenty participants, aged between 22 and 68, with only two women participating. Whereas the bookbinding group is made up of twenty-two men, aged between 21 and 56.

Despite not having specific information on the diagnoses, the following tables describe the characteristics observed in the participants who take part frequently in the interventions.

Table 1. Characteristics of the carpentry workshop participants. Own elaboration

Carpentry workshop participants	
User	J, 43 years old
Observed Characteristics	Shows willingness to intervene, is generally in a good mood, helps his peers and encourages them to participate. Understands the instructions and performs the exercises autonomously.
User	MC, 49 years old

Observed Characteristics	Usually shows willingness to intervene, however, on several occasions has complained of discomfort prior to the exercises. Tends to lose concentration and lose balance while performing the exercises. Positively supportive of his peers, he encourages them to participate, always in a good mood.
User	L, 67 years old
Observed Characteristics	Shows willingness to perform the activities, states that he likes the interventions. Understands the instructions of the exercises and applies the corrections with no major inconveniences. A reserved person, but with a good sense of humor and dearly loved by the group. Physically, some difficulties arise in flexibility exercises.
User	I, 24 years old
Observed Characteristics	Enjoys participating, as his peers. Shows willingness to perform the activity. Understands the instructions with no problem and can usually perform the exercises easily, participates in different physical activities and sports. Sometimes gets distracted joking with his peers.
User	DA, 45 years old
Observed characteristics	Initially, the user was somewhat reluctant to participate in the interventions, however, his attitude has improved radically, he waits his turn and participates with enthusiasm. Usually volunteers for the demonstration of the proposed activities. Understands and executes the exercises with no problem, showing coordination and autonomy.
User	J, 29 years old
Observed Characteristics	Enjoys participating, shows interest in learning the exercises. On some occasions gets involved in arguments with his peers, so it is important to take into consideration his placement. Performs the exercises very well, however, constantly asks for repetition of the exercises and reinforcement of the instructions.
User	V, 28 years old
Observed Characteristics	Participates actively in the interventions, but on many occasions has stated not feeling like performing the routine due to being discouraged or because of a headache, this attitude usually improves when the routine has finished. Usually understands the exercises, but it is necessary to reinforce the instructions, hypotonia in his posture and some difficulties with spatial location and laterality are observed. It is important to control the execution, since sometimes he loses concentration and remains motionless.

Table 2. Characteristics of the bookbinding workshop users. Own elaboration

User	I, 54 years old
Observed Characteristics	Participates actively in the routines, does not present major difficulties in understanding and performing the activities. However, in the execution of some exercises, small amplitude in the movements and lack of coordination have been observed, mainly regarding the lower body. Great concentration while exercising, has a good relationship with his peers.
User	R, 23 years old
Observed Characteristics	Participates actively in the routines, always trying to be close to whoever directs the activities. Seems to understands the exercises, however, during the performance, difficulties have been observed regarding the amplitude of the movements, laterality and coordination, it proves necessary to constantly reinforce the technique of the exercises.
User	J, 54 years old

Observed Characteristics	Shows interest and willingness to perform the exercises, animated most of the time. During the performance of the activities, difficulties in laterality, range of motion and rigidity have been observed. Corrections and assistance to perform some exercises are needed.
User	J, 53 years old
Observed Characteristics	Participates actively in the routines, showed interest and enthusiasm from the beginning of the program. Does not present major difficulties understanding and executing the exercises, however, rigidity has been observed in the execution of some movements. Very active and enjoys demonstrating exercises.
User	C, 35 years old
Observed Characteristics .	Participative, he is concentrated during the routines. Some difficulties in spatial orientation and coordination in the execution of certain exercises have been observed, sometimes exaggerates the movements and this affects posture. Interacts positively with his peers.
User	O, 44 years old
Observed Characteristics	Participates constantly in the routines, generally in a good mood, shows disposition towards the activity. Understands and follows the instructions of the exercises with no problem, nevertheless, sometimes loses coordination and presents some difficulties regarding spatial location.
User	R, 21 years old
Observed Characteristics	Despite showing willingness and enthusiasm for the application of the program, multiple difficulties have been observed both regarding understanding and execution of the exercises, difficulties related to laterality, loss of coordination and continuity of the exercises, besides difficulties in spatial location and the identification of some body segments. Performs the activity mainly through imitation, it is necessary to constantly supervise and correct.
User	J, 37 years old
Observed Characteristics	No problem understanding the instructions and executing the exercises. Shows willingness to participate in the activity, and performs routines without getting distracted. Preference to work with certain peers.

User	S, 38 years old
Observed Characteristics	Has participated actively and constantly since the beginning of the program, showing willingness to engage in the activities. Understands the instructions and performs the exercises without major difficulties, however, on occasions changes the plane of motion, with rotation of the body.
User	A, 24 years old
Observed Characteristics	Shows interest in the program and physical activities in general, performs the exercises fluently, although some difficulties with the understanding of the instructions have been observed. Does not like being corrected.
User	M, 44 years old
Observed Characteristics	Enthusiastic, shows a good disposition performing the routines, no major difficulties in understanding and executing the exercises have been observed. Works concentrated without losing the continuity of the exercises.
User	A, 38 years old
Observed Characteristics	From the beginning, has always shown interest and willingness to participate in the program, enjoying greatly the activities. Participates actively and also helps peers when needed. Understands easily the instructions and applies the corrections of the exercises with no problem.

User	E, 55 years old
Observed characteristics	Showed interest from the beginning, although his enthusiasm is not so evident, he has mentioned that he feels good with the routines. Has no problem understanding the instructions, however, his physical characteristics prevent him from performing certain types of movements, so it is necessary to find alternatives or adapt some of the exercises. It is important to place him in a strategic location where help can be offered easily when needed.
User	M, 32 years old.
Observed Characteristics	No difficulties in understanding or executing the exercises, however, has expressed conflicting opinions during the course of the program, on some occasions expressing displeasure, but on others expressing enjoyment. Unwillingness to participate in some sessions, seeming somewhat bad-tempered.
User	M, 41 years old
Observed Characteristics	Always willing to participate, collaborates by grouping peers together, shows interest and likes the activities. Despite this, it has been observed that when performing the routine he loses concentration, remaining immobile or losing movement coordination, so it is necessary to draw his attention so that he does not lose continuity.
User	S, 21 years old
Observed Characteristics	Very enthusiastic, most of the time in a good mood. Participates actively in the routines performing the exercises without difficulty, showing dexterity in the development of the routine. Sometimes, due to the enthusiasm, exaggerates the movements, so the technical aspects of the routine must be reminded.
User	C, 51 years old
Observed Characteristics	Participative and collaborative, usually in a good mood and willing to participate. Understands the instructions without difficulty and applies the corrections of the exercises autonomously. However, it has been observed that he is constantly asked for help with other tasks, accordingly, sometimes he does not participate in the routine. Sometimes we have to draw his attention as he loses concentration making jokes.
User	J, 21 years old
Observed Characteristics	Shows great interest in physical activities and sports, shows dexterity and coordination in the execution of exercises. He does not seem to have any trouble understanding the instructions. From the beginning has always had a good attitude towards the program.
User	F, 33 years old
Observed Characteristics	Remarkably constant, very concentrated during the routines, performs the exercises autonomously applying the learned technique. Understands the instructions easily and communicates fluently, even invented a specific exercise for the workshop.
User	J, 23 years old
Observed Characteristics	Has participated constantly since the beginning of the program, somewhat withdrawn, always looks for places away from the rest of the group to perform the exercises. Corrections should be made verbally as he does not like to be touched. Performs the exercises without difficulty.
User	J, 29 years old
Observed Characteristics	Participates in the sessions, does not present any problems understanding the instructions or with the execution of the exercises. Compared to his peers, he seems somewhat shy, however, when given the opportunity, he likes to give his opinion about the routine.
User	A, 29 years old

Observed Characteristics	Shows enjoyment of the activities, participates actively and is concentrated during the sessions, presents no difficulty in understanding the exercises, applies the corrections learnt.
User	I, 41 years old
Observed Characteristics	Presents some difficulties in understanding the instructions, seems to understand better after the demonstration and practice of the exercises. Despite this, he participates in the activity without problems and works concentrated.

2.2 Program Phases

The design of the program starts with a period of participation and observation of the physical activities carried out by the participants of the carpentry and binding workshops of an occupational centre in the Community of Madrid (Spain). Within the activities offered by the centre, the groups carried out a postural hygiene routine that consisted mainly of breathing and joint mobility exercises. The purpose of this program was to prevent possible injuries that could result from the workload and specific tasks of the workshops.

The program was divided into three phases, the first one regarding training and implementation, the second one continuity and monitoring, and finally, evaluation. During the first phase, the physical education teacher performed the exercises while instructing the participants and teachers of each workshop during a month on a daily basis. During the second phase, the teachers of the different workshops had to perform the routine at the end of the working day. During this phase, the physical education teacher met the group once a week, and met the teachers every two weeks to evaluate the activity.

2.3 Gathering of information

The gathering of information which was the basis for the design of the proposal was carried out using three instruments for a period of four months. The instruments used were: field diary, interviews with professionals, and application of questionnaires to the workshop participants.

To complement the information obtained through observations, which was registered in the field diary, the teachers of the binding, carpentry, and physical education workshops, and the director of the occupational centre were interviewed. Along with this, questionnaires were applied to participants asking about their perceptions and expectations in relation to the program.

The questionnaires were applied in two different moments, the first one aimed at gathering information about the assessment of the postural hygiene program by the groups. The second one aimed at measuring the degree of effectiveness they perceived, with respect to the objectives set. In order to facilitate understanding, the questions were asked verbally, and were also accompanied by pictures and

pictograms (Palao, S.) The design chosen for these pictures was simple, based on what is generally used to know the distribution of the frequencies of the answers (Casas Anguita, Repullo Labrador, & Dondado Campos, 2003).

Illustration 1. *Example of the pictures used in the questionnaire. Own elaboration*

The first questionnaire was applied to a total of 30 participants who regularly attended the workshops.

The second questionnaire aimed at gathering information about the effectiveness perceived by the participants. For this purpose, four questions were asked to a group of 31 participants, this number changed due to the incorporation of one who had been previously ill.

3. PROGRAM STRUCTURE

The program consists of eleven exercise routines, corresponding to the months when the participants attend the centre, descriptive and visual guidelines were designed for each of the routines, including breathing, mobility and elongation and/or relaxation activities. The objective is that each month a new routine of exercises is applied, which should ideally be carried out from Monday to Friday at the end of the working day, or when it is deemed appropriate. As for the timing of the program, it should be carried out throughout the working year, with the exception of holidays. The practical sessions are designed to have a duration of approximately 15-20 minutes.

The proposal is planned to be implemented in six different phases: background research, training and introduction, development of sessions, process evaluation, biannual and final evaluation and, finally, program completion. The temporality and objectives of each of the phases is defined.

1. **Background research.** Obtain information on the number of injuries and/or musculoskeletal alterations of the participants that have resulted from the

workload and/or work routine. Planned to be carried out before the start of the program, with a duration of approximately one week.

2. **Training and introduction.** The objectives of this phase are: to present the technical aspects and objectives of the exercises, to resolve possible doubts about the routine, and to offer methodological recommendations and descriptive sheets of the exercises. It should be implemented by a physical activity professional and carried out at the beginning of each month or before changing routines.

3. **Development of sessions.** Perform the exercise routine, keep a record of the sessions and of the problems that arise or prevent performance. It would be convenient to run the sessions from Monday to Friday at the end of the working day, but they could also be run at any other time.

4. **Process evaluation.** Resolve the doubts related to the application and execution of the exercises, collect and seek solutions to the incidents that take place. This phase should be carried out one week after the beginning of the routine.

5. **Biannual and final evaluations.** On a biannual basis, evaluate attitudinal and technical aspects of the participants, identify possible drawbacks and make the appropriate adaptations or changes. In the final evaluation, compare the records of injuries and/or musculoskeletal disorders of the participants, and verify if the program meets the general objective.

6. **Program Completion.** Celebrate a fun day on the last day of the program with the participants and teachers of each workshop, sharing opinions and reflections on the implementation of the program.

Rutina N°1

Tipo de ejercicio	Descripción	Repeticiones/ Duración
Respiración	Con las piernas separadas al ancho de las caderas, realizaremos una inspiración profunda mientras elevamos los brazos, para bajarlos durante la exhalación.	5
Movilidad	**Cuello** Con las piernas separadas al ancho de las caderas y los brazos relajados al costado del cuerpo, giraremos lentamente el cuello hacia el lado derecho e izquierdo. Para después realizarlo de abajo hacia el frente (llevando el mentón al pecho, evitando extender el cuello)	10 repeticiones
	Elevación de hombros Con las piernas separadas al ancho de las caderas y los brazos relajados al costado del cuerpo, elevaremos los hombros lentamente de manera simultánea. Como variación se puede realizar de manera alternada.	15 repeticiones
	Rotación de muñeca Con las piernas separadas al ancho de las caderas y los brazos extendidos hacia el frente, se empuñarán las muñecas para realizar rotaciones en ambos sentidos.	10 giros cada lado Repetir dos veces
	Flexión de cadera Elevaremos la pierna con la rodilla flexionada de manera alternada. Como si estuviéramos "marchando".	10 repeticiones con cada pierna
Elongación y/o relajación	**Cuello (musculatura flexora y rotadora)** Con las piernas separadas al ancho de las caderas y los brazos relajados al costado del cuerpo, se inclinará el cuello hacia el lado derecho manteniendo esta posición durante diez segundos, para después repetir el movimiento hacia el lado izquierdo. También se puede realizar una ligera presión con la mano.	10" por lado
	Espalda (musculatura dorsal) Con las piernas separadas al ancho de las caderas, se extenderán los brazos hacia el frente con los dedos entrelazados, el mentón se llevará al pecho basculando la pelvis.	15"
	Antebrazo (musculatura flexora del antebrazo y muñeca) Con las piernas separadas al ancho de las caderas se elevará un brazo hacia el frente con la palma hacia arriba, quedando en línea con el hombro. Con la mano contraria se tomarán los dedos llevándolos hacia abajo.	10" por cada brazo

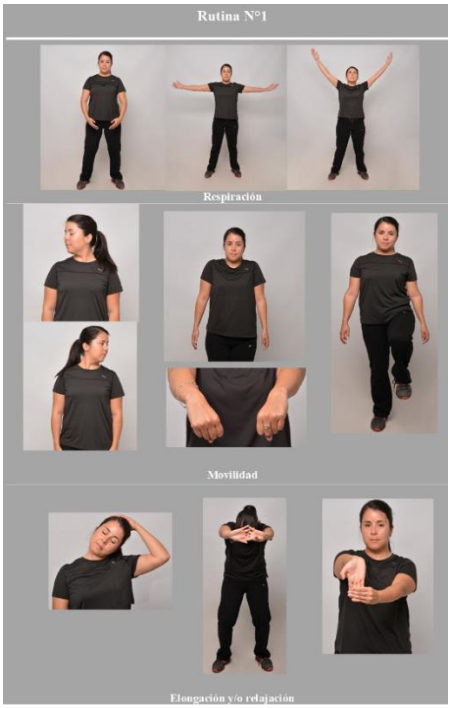

Illustration 2. Work routines, description and picture of the exercises. Own elaboration

1.1 Design and development of the sessions

The design of the sessions consists of three main parts: opening, development and closure. Each part will encourage the establishment of routines that facilitate and promote participation. The objectives of each part are the following:

- Opening: gather participants, verify that they are in a safe position, and make them aware of body posture.

- Development: perform breathing and joint mobility exercises, emphasise the technique of each exercise, supervise the execution of the routine.

- Closure: Perform the stretching and/or relaxation exercises, supervise the execution of the exercises, finish the routine with an applause or say goodbye to the group.

The routines are composed of breathing, mobility, elongation and/or relaxation exercises, trying to cover the work of the different muscle groups. It should be mentioned that the activities and the duration of the exercises are just recommended, and should be subject to a continuous evaluation based on the performance of the users and the criteria of the professional who is responsible of the activities.

2. METHODOLOGICAL GUIDELINES FOR THE IMPLEMENTATION OF THE PROGRAM

It is important to consider certain didactic suggestions that help us optimise work with people with intellectual disabilities. In the literature on the subject we can find general recommendations related to the transmission of information, use of the material, design of the activities and routines, such as: using simple and specific instructions, simplifying tasks by establishing intermediate steps, planning activities that promote autonomy, reducing distractors, anticipating activities or changing routines (Rios Hernández, 2014; Sanz Rivas & Reina Vaíllo, 2012). It is important to be able to adapt these recommendations to the characteristics of each group and context in which they are inserted. Considering this and what is observed from everyday work with the participants of the occupational centre, some suggestions are offered that could be useful for the implementation of the routines.

- The use of examples for the performance of the exercises; "*we will join and stretch out our arms like an arrow", "we will stretch out as if we wanted to touch the ceiling".*

- The use of strategies that help remember the performance technique, for example; "*remember that in this exercise when we stretch out our arms the palm of the hand looks up."*

- Explain the objective of each exercise.

- Remind them constantly that we should not feel pain during the performance of activities.

- Avoid hyperextension of the spine.

- Try to use an obstacle-free space.

- Supervise the disposition of the participants and the furniture, in order to prevent accidents, and the disposition of the participants in order to prevent conflicts or distractions.

- Try to inform users about changes in the routine, cancellation of activities due to workload or extracurricular activities, among others.

5. PROGRAM EVALUATION

The initial records of the field diary established as a strength that the program was appreciated and participants adhered to it, both the groups and the professionals involved. On the other hand, among the main weaknesses was the limited availability of the physical education teacher in order to plan, organise and carry out the activities for the users of the different services offered by the centre. Due to this and

after a period of training, the activities were delegated to the teachers of each workshop.

In relation to the interviews, and specifically to the answer to the question*, what difficulties or obstacles have you observed in the implementation of the program?* Both the director of the centre and the physical education teacher agree that the main obstacle is the lack of time and human resources to carry out the activities. The teachers of the carpentry and binding workshops suggest changing the schedule and the exercises, since they noticed that the participants were bored with the constant repetition of the exercises. At the same time, the professionals commented that they perceived improvements in relation to the participants' mood and feeling of physical well-being, also pointing out as positive the fact that it is not necessary to make a large investment in space and materials.

According to the answers received in the first questionnaire, it was evident that the program was highly valued by them. 96.6% said they liked the activities and wanted to continue. Regarding the implementation of new routines, the participants were also receptive, 90% of them answered that they would like to learn new exercises. As for their feelings, some of them who felt discomfort or sadness before carrying out the activities, started feeling better after the exercises. However, we did not delve into whether this change was due to the implementation of the routine or to a combination of other elements, such as the interaction with their peers.

The results of the second questionnaire showed that 97.7 % of the participants considered it important to maintain a good posture. The same percentage said that the exercises had helped them to improve their habits. 90.3% considered that the exercises had contributed to a feeling of physical well-being. The lowest percentage was registered in the fourth question, 51.46% admitted not doing the exercises individually in other contexts, compared to 41.9% who did carry out the exercises on their own initiative, at home or in other contexts.

The application of the questionnaires and interviews showed that both participants and professionals of the centre value the activity positively and want it to remain, however, certain aspects that derive from the lack of organisational time and human resources can be improved. In accordance with this, an annual strategic planning was designed, with the aim of improving these points and consolidate those aspects considered as strengths, and which result in a direct benefit for both the participating groups and the professionals who will implement the program in the future.

3. CONCLUSIONS

Although the design of the proposal is based on the structure of the centre where the observations and data collection were carried out, the implementation and adaptation of the program in other occupational centres could be feasible since there is no need for a large investment in infrastructure and human resources.

Considering the above, it is essential that the activities are adapted taking into account the characteristics of the place and the participants, although the program considers routines that change every month, depending on the evaluation carried out by the professionals, extending or shortening the duration of the performance, generating transitions or a gradual incorporation of the exercises. The fact sheets were designed mainly to help professionals, but they could be also used as a reinforcement in direct work with the participants, in information panels or activity calendars.

As mentioned above, the activities focus on breathing, joint mobility and flexibility exercises for occupational risk prevention. However, the transversal work with other objectives such as self-care, autonomy, adherence to the practice of physical activities and teamwork could complement and strengthen the proposal.

In relation to evaluations, the design of the instruments prioritised simplicity in their application, and the optimisation of time and human resources. Despite the assessment that allows us to obtain data about the technical and attitudinal aspects and sensations of the participants, one of the limitations found would be the absence of qualitative data that allow us to compare the progress of the participants, and measurements of flexibility, strength, and joint mobility, among others. This would complete the background in order to obtain a comprehensive evaluation of the program.

During the elaboration of the proposal, we realised that there are some concepts that generate confusion regarding the terminology used during the physical activities carried out within the working day. Workplace exercise, active pause, and pause gymnastics are some of the terms used to define these activities, however, many of them are also used in other areas of physical activity and sport, so we consider relevant a review and update of the terms.

In addition to the aforementioned, we observe that there is little research on the prevention of occupational risks of people with intellectual disabilities by programs associated with the practice of physical activity, so this context is a possible field for future lines of research.

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