

The effects of a self-determination theory based training program on teaching styles adapted to inclusive Physical Education. Does previous contact with students with intellectual disabilities matter?

Supplementary Table 1. TREND checklist (Des Jarlais et al., 2004)

Paper Section/ Topic	Item No	Descriptor	Reported? Page #
Title and Abstract			
Title and Abstract	1	• Information on how unit were allocated to interventions	1
		• Structured abstract recommended	1
		• Information on target population or study sample	1
Introduction			
Background	2	• Scientific background and explanation of rationale	2-3-4
		• Theories used in designing behavioral interventions	2-3
Methods			
Participants	3	• Eligibility criteria for participants, including criteria at different levels in recruitment/sampling plan (e.g., cities, clinics, subjects)	4
		• Method of recruitment (e.g., referral, self-selection), including the sampling method if a systematic sampling plan was implemented	4
		• Recruitment setting	4
		• Settings and locations where the data were collected	4
		• Details of the interventions intended for each study condition and how and when they were actually administered, specifically including:	
Interventions	4	○ Content: what was given?	4-5
		○ Delivery method: how was the content given?	4-5, supplementary
		○ Unit of delivery: how were the subjects grouped during delivery?	
		○ Deliverer: who delivered the intervention?	4-5
		○ Setting: where was the intervention delivered?	4-5
		○ Exposure quantity and duration: how many sessions or episodes or events were intended to be delivered? How long were they intended to last?	4-5, supplementary
		○ Time span: how long was it intended to take to deliver the intervention to each unit?	4-5, supplementary
○ Activities to increase compliance or adherence (e.g., incentives)	4-5, supplementary		

Objectives	5	<ul style="list-style-type: none"> • Specific objectives and hypotheses • Clearly defined primary and secondary outcome measures 	4 4-5
Outcomes	6	<ul style="list-style-type: none"> • Methods used to collect data and any methods used to enhance the quality of measurements • Information on validated instruments such as psychometric and biometric properties 	5 5
Sample Size	7	<ul style="list-style-type: none"> • How sample size was determined and, when applicable, explanation of any interim analyses and stopping rules • Unit of assignment (the unit being assigned to study condition, e.g., individual, group, community) 	4-5-6 4
Assignment Method	8	<ul style="list-style-type: none"> • Method used to assign units to study conditions, including details of any restriction (e.g., blocking, stratification, minimization) • Inclusion of aspects employed to help minimize potential bias induced due to non-randomization (e.g., matching) 	Not applicable Not applicable
Results			
Participants flow	12	<ul style="list-style-type: none"> • Flow of participants through each stage of the study: enrollment, assignment, allocation, and intervention exposure, follow-up, analysis (a diagram is strongly recommended) <ul style="list-style-type: none"> ○ Enrollment: the numbers of participants screened for eligibility, found to be eligible or not eligible, declined to be enrolled, and enrolled in the study ○ Assignment: the numbers of participants assigned to a study condition ○ Allocation and intervention exposure: the number of participants assigned to each study condition and the number of participants who received each intervention ○ Follow-up: the number of participants who completed the follow-up or did not complete the follow-up (i.e., lost to follow-up), by study condition ○ Analysis: the number of participants included in or excluded from the main analysis, by study condition • Description of protocol deviations from study as planned, along with reasons 	4 Not applicable Not applicable 4 4 4
Recruitment	13	<ul style="list-style-type: none"> • Dates defining the periods of recruitment and follow-up 	4-5
Baseline Data	14	<ul style="list-style-type: none"> • Baseline demographic and clinical characteristics of participants in each study condition • Baseline characteristics for each study condition relevant to specific disease prevention research • Baseline comparisons of those lost to follow-up and those retained, overall and by study condition • Comparison between study population at baseline and target population of interest 	4 Not applicable 4 Not applicable
Baseline equivalence	15	<ul style="list-style-type: none"> • Data on study group equivalence at baseline and statistical methods used to control for baseline differences 	5-6

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Numbers analyzed	16	<ul style="list-style-type: none"> Number of participants (denominator) included in each analysis for each study condition, particularly when the denominators change for different outcomes; statement of the results in absolute numbers when feasible 	6-7-8
		<ul style="list-style-type: none"> Indication of whether the analysis strategy was “intention to treat” or, if not, description of how non-compliers were treated in the analyses 	5
Outcomes and estimation	17	<ul style="list-style-type: none"> For each primary and secondary outcome, a summary of results for each estimation study condition, and the estimated effect size and a confidence interval to indicate the precision 	6-7-8
		<ul style="list-style-type: none"> Inclusion of null and negative findings 	Not applicable
		<ul style="list-style-type: none"> Inclusion of results from testing pre-specified causal pathways through which the intervention was intended to operate, if any 	6-7-8
Ancillary analyses	18	<ul style="list-style-type: none"> Summary of other analyses performed, including subgroup or restricted analyses, indicating which are pre-specified or exploratory 	6-7-8
Adverse events	19	<ul style="list-style-type: none"> Summary of all important adverse events or unintended effects in each study condition (including summary measures, effect size estimates, and confidence intervals) 	6-7-8
Discussion			
Interpretation	20	<ul style="list-style-type: none"> Interpretation of the results, taking into account study hypotheses, sources of potential bias, imprecision of measures, multiplicative analyses, and other limitations or weaknesses of the study 	9-10-11
		<ul style="list-style-type: none"> Discussion of results taking into account the mechanism by which the intervention was intended to work (causal pathways) or alternative mechanisms or explanations 	9-10-11
		<ul style="list-style-type: none"> Discussion of the success of and barriers to implementing the intervention, fidelity of implementation 	10-11
		<ul style="list-style-type: none"> Discussion of research, programmatic, or policy implications 	11
Generalizability	21	<ul style="list-style-type: none"> Generalizability (external validity) of the trial findings, taking into account the study population, the characteristics of the intervention, length of follow-up, incentives, compliance rates, specific sites/settings involved in the study, and other contextual issues 	11
Overall Evidence	22	<ul style="list-style-type: none"> General interpretation of the results in the context of current evidence and current theory 	9-10-11

Supplementary Table 2. Association between teacher motivational behaviours (Ahmadi et al., 2023) and presence in training program

AUTONOMY-SUPPORTIVE TEACHING STYLE				
Teacher motivational behaviour		Presence in training program delivery	Presence in training program content	
AS2	Teach in students' preferred ways	Use knowledge gleaned about the student values and preferences to design class activities customized to them.	Initial diagnosis of the group-class to adapt the contents. Tasks were designed based on previous knowledge of rugby and their experiences.	Contents about how to get to know students' preferences and strategies to customize activities (Themes 1 and 4)
AS3	Provide rationales	Explain the reason to perform the behaviour (e.g., why an activity is important and valuable, or how it might be personally useful).	Provision of rationale to include students with disabilities in PE sessions.	Practical examples of tasks where initial and final reflections are worked on with teachers and their students aiming to make students aware of the relevance of the activities carried out in class (Themes 2 and 3)
AS4	Allow student own-paced progress	Allow students to work independently and to solve a problem in their own pace.	Participants worked in their own pace on the assessment activities proposed in the training program.	Contents related to the TREE model of adaptations on the teaching style (communication, language, support, instructions), materials, spaces and environment, that facilitates the participation of students with and without disabilities, adapting to their own pace (Themes 1 to 4)
AS6	Ask students about their experience of lessons	Ask students for feedback about how classes are going; could apply to either the content of lessons or the process/learning design.	Participants were regularly asked about their perceptions on contents and activities.	Examples of initial and final evaluations, and strategies to implement students' proposals in the class (Themes 1 and 4)
AS8	Provide a variety of activities	Provide a variety of activities in a way that keeps things interesting.	The program syllabus included different-nature activities.	Content explaining the different ways of approaching specific content in different ways. (Themes 2 and 3)
AS10	Discuss class values	Collaboratively establish the values important to display in the class or remind students of the collaboratively derived values.	Instructor and participants discussed some aspects about the delivery and organization of the program.	Content related to raising awareness and sensitization of pupils, dealing with individual differences, explaining the value of individual characteristics and of doing tasks in different ways by learning about sports with different rules and regulations. (Themes 2 and 3)

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AS11	Provide extra resources for independent learning	Introduce extra resources for further learning or support outside of class time.	Participants were provided with extracurricular resources to gain some more knowledge about inclusive practices in PE.	Examples of extra resources to be used in the PE context such as the use of videos explaining rugby, watching a film or inviting an athlete with a disability to a PE class (Theme 3)
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STRUCTURE TEACHING STYLE

Teacher motivational behaviour		Presence in training program delivery		Presence in training program
CS1	Provide optimal challenge	Offer students more challenging tasks if they find it too easy, or easier tasks if they find it too difficult	Activities proposed to the participants, were flexible enough to be feasible and challenging to all of them.	Content that encourages the teacher to provide students with tasks set at different levels of complexity, thus facilitating more challenging participation or easier tasks if they find them too difficult (Theme 4).
CS3	Praise improvement or effort	Provides praise that targets the improvement or effort from the student	Instructor provided positive feedback to participants about their engagement in the training activities.	Practical content related to feedback strategies that provide praise focused on student improvement or effort (Themes 3 and 4).
CS8	Display hope, encouragement, and optimism	Provide positive expectations for student success	In the beginning of the training program, the instructor gave an optimistic speech about the learning that would be achieved during the program.	Content related to understanding the characteristics of intellectual disabilities and their effect on practice reinforces the perspective of teachers to focus on the skills and abilities of learners rather than on the limitations of the disability itself (Themes 2 to 4).
CS15	Active learning	Set up activities where all students are engaged in a learning activity	The training program included different individual and collaborative activities aimed to keep participants engaged.	Content related to the main considerations for the practice of students with disabilities, exemplifying that teachers set up activities in which all students participate, allowing each student to practice in order to progress in the development of a skill. (Themes 3 and 4)

Supplementary Table 3. Inclusive rugby training program at M7

Module 7 Inclusive Rugby School Proposal		This proposal was embedded into the training course "School Rugby Workshop" for PE teachers at the national level, which demonstrates interest in rugby as a sport modality, as well as possibilities as content in PE to include SWID. The objectives of the inclusive rugby module were (a) to acquire the knowledge to teach the main characteristics of an inclusive sport practice of rugby in an educational context; (b) to learn the main characteristics of people with intellectual disabilities as well as considerations and strategies for fostering an inclusive sport practice; and (c) to design, implement, and evaluate an inclusive rugby session (if possible/applicable). The inclusive module had a total duration of 4 hours and was carried out online.	
Theme	Title	Content	Materials - Considerations
T1	Conceptual approach to inclusive sport	Basic concepts and terminology; practical possibilities	A PowerPoint, book chapter, and notes were available on the platform. Participants must have completed the questionnaire to gain access.
T2	Rugby as a tool for the inclusion of students with disabilities	Characteristics and strategies	PowerPoint and <i>Trainer's Guide</i> (Down Spain; PDF format) were available on the platform.
T3	Considerations for inclusive sport for people with an intellectual disability	Main characteristics of people with an intellectual disability; considerations to address them in inclusive sport contexts: strategies based on teacher motivational behaviours to promote BPN satisfaction	Book chapter, notes, and a table with different teaching behaviours and practical examples to implement strategies that promote BPN satisfaction (Ahmadi et al., In press) were available on the platform.
T4	Final assessment	Practical implementation in PE; analysis of the implementation (organizational aspects, difficulties, feelings, etc.)	This was a real practice session. Participants have to design an inclusive rugby session and implement it in their classrooms. Completed were an online teacher's diary and a competencies questionnaire on SurveyMonkey or Google Drive.
	Final assessment	Practical implementation in PE; analysis of the implementation (organizational aspects, difficulties, feelings, etc.).	This was designed to provide disability awareness and sensitisation, including a student worksheet and discussion at the end of class and an online teacher's diary and competencies questionnaire on SurveyMonkey or Google Drive.