Exploratory Study of A Hybrid Training Course for Facilitators of A Program for Parents of Autistic Children

Suzie McKinnon[1]*, Myriam Rousseau[2], Mathieu Mireault[3] and Jacinthe Bourassa[3]

[1]Integrated University Health and Social Services Centre of Saguenay-Lac-St-Jean (IUHSSC), IHSSC of Bas-St-Laurent and IHSSC of Côte-Nord, Avenue Evangeline, Sept-Iles (Québec) Canada

[2]Intellectual Disability and Autism Spectrum Disorder Research Institute affiliated with the IUHSSC of Mauricie-and-Centre-du-Québec (MCQ), Canada

[3]Doctoral candidate in psychology, IUHSSC of Mauricie-and-Centre-du-Québec (MCQ), Canada

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*Corresponding author: Suzie McKinnon, Integrated University Health and Social Services Centre of Saguenay-Lac-St-Jean (IUHSSC), IHSSC of Bas-St-Laurent and IHSSC of Côte-Nord, Avenue Evangeline, Sept-Iles (Québec) Canada, Email: mathieu.mireault@ssss.gouv.qc.ca

Abstract

This study aims to document the experience and appreciation of participants regarding a hybrid distance training course for facilitators of a program for parents of autistic children. Using a quantitative method and online questionnaires, the study aims to assess: 1) the relevance and usefulness of asynchronous content; 2) the achievement of different training objectives; 3) future facilitators' sense of self-efficacy; and 4) the level of satisfaction with training. Analysis of results reveals that participants judge the asynchronous content to be relevant and useful. Both synchronous and synchronous objectives likewise appear to be achieved. Furthermore, future facilitators feel confident about facilitating the program after completing the course and demonstrate a high level of satisfaction with the training received.

Keywords: Training; Facilitator; Autism; Parent; Child

Abbreviations: ASD: Autism Spectrum Disorder; APA: American Psychiatric Association; CDC: Centers for Disease Control; CSQ: Client Satisfaction Questionnaire; MSSS: Ministry of Health and Social Services

Introduction

Autism spectrum disorder (ASD) is a neurodevelopmental condition characterized by deficits in social communication and the presence of restricted and repetitive behaviors (American Psychiatric Association [APA], [1]). The neurodevelopmental disorder is increasingly diagnosed and now affects 1 in 66 children aged 5 to 17 years in Canada [2]. According to recent data from the Centers for Disease Control and Prevention (CDC), the prevalence of ASD in children 8 years old is 1 in 36 [3], pointing to a rise in the need for services for these children and their families. It is essential to support, train and accompany parents in their interventions with their child [4-9]. For example, offering specific training to parents can help improve their competencies and intervention techniques [10], allowing them to respond more effectively to their child's behavioral challenges [11] and thus contributing to foster the child's social participation. However, a barrier to family participation, however, is the difficulty of

accessing training [6]. Because of the importance of supporting these parents [12,13], and because this can be achieved with the right training [6,8,14-16], parents must have access to a training that responds to their needs.

In Quebec, the program *Au-delà du TSA*: *des compétences à ma portée* © [Beyond ASD: Parenting skills within my reach], [17] was developed, evaluated and edited in recent years to respond to the specific needs of parents with an autistic child. The program is easy to implement and has positive effects for both parents and children [18], but potential facilitators need to be trained. A two-day, in-person training course is therefore available from trainers recognized by the Institut universitaire en déficience intellectuelle et en trouble du spectre de l'autisme (IU en DI et TSA, University Institute of Intellectual Disability and Autism Spectrum Disorder). In the present context (pandemic, labor shortages, employee turnover, etc.), however, the public establishments offering this

program find it difficult to free up their workers to attend. What's more, the IU en DI et TSA is regularly slow to offer sufficient facilitator training to satisfy the demand. Thus, the lack of trained facilitators and their unavailability hinder, and even prevent, the program's implementation.

Facilitator training

Professional training, commonly known as continuing education, refers to any structured activity attended by a professional for the purpose of updating and developing their skills (ministère de l'Éducation et de l'Enseignement Supérieur [Ministry of Education and Higher Education], [19]. In this case, it adequately prepares future program facilitators to manage their program and favors appropriation of a program's basic concepts, thus increasing the probability of uniform facilitation [20]. Training is a key component of program implementation [21,22]. Identified as a key indicator of implementation quality [22-24], it facilitates the correct application of a program's protocol [25] as well as its implementation in compliance with expectations [26]. A program's implementation fidelity may therefore risk being compromised if the training is inadequate for this stakeholder group [27,28]. In short, training plays a vital role by preparing future facilitators to implement a program consistent with expectations and promotes the achievement of anticipated results.

Hybrid distance training

Distance learning is defined by "a teaching-learning process that takes place using media resources, while teacher and learner are at a physical distance from each other" (CLIFAD, 2007, p. 3 cited in Haute autorité de santé [HAS], [29] [free translation]). It can take the form of self-learning or be guided by a facilitator who plans and organizes training activities using synchronous and asynchronous communication tools [29]. Hybrid distance training proposes the presence of synchronous and asynchronous modes [30-32]. It combines the advantages of synchronous learning, which involves interactivity between learners and between trainer and learners, and asynchronous learning, which proceeds at the learner's own pace [33,34]. This type of training requires learners to be motivated and self-disciplined [35,36]. Moreover, although it involves scheduling constraints [37], it brings the advantage of flexibility, since learners can learn from home [38]. Predetermined meetings, however, can facilitate participants' commitment [39]. The hybrid mode has produced substantial changes in terms of the different possibilities offered for continuing education. Its use has increased due to the growth of online learning in recent years.

Facilitator training for Au-delà du TSA

Training for future facilitators of the program *Au-dela du TSA* was developed to ensure fidelity of implementation [17] by allowing them to understand the program's purpose and objectives, familiarize themselves with the three guides used (facilitation, participants and follow-up at home), understand the program's key principles and implement the methods and activities designed to facilitate parents' learning. Delivered by established trainers, the course initially lasted 14 hours and required the physical presence of participants/learners. In recent years, however, parents' access to the program [17] decreased significantly, largely due to the lack of trained facilitators. To overcome this obstacle and make the program more accessible to these parents, the *IU en DI et TSA* revised its training offer for future facilitators.

Thus, the work conducted by an expert committee (consisting of psychoeducators, psychologist, planners, programmers, researchers, information officers, techno-clinical advisor, knowledge management specialist, trainers) resulted in converting the initial, in-person training into a hybrid mode of distance training, where one part of the training is offered asynchronously, and the other part, synchronously. This synchronous part consists of three asynchronous training modules accessible on the Talent LMS online training platform (approximately two hours long). These modules are conducted in the form of interactive videos during which participants must answer certain questions. In complement to these three modules, two half-days (six hours long) of synchronous distance training are facilitated by two trainers having extensive experience with the program and its facilitation. The maximum number of participants during these half-days is 16. The course is delivered via Zoom. Table 1 presents the objectives and format of the modules and complements (half-day training).

Although many studies [29,40,41] attest to the effectiveness of distance training, there is little research, to our knowledge, on converting in-person training into a hybrid online format. In this regard, Mourgela [42] mentions that the conception of a distance training model based on in-person training is complex, insofar as it calls for reorganizing several parameters. During this conversion, the establishment of an online social presence is particularly recommended [43]. Several studies [38,40,41,44] support the importance of interactions between learners as well as between learners and trainers with a view to improved satisfaction and commitment during the course. Different strategies are used to encourage interaction and a sense of community among learners. They include a discussion forum [41], synchronous meetings [41,45], synchronous dyad discussions [46], thorough feedback, emails and a presentation by each learner in the forum [40].

Social validity

Although training is essential for future facilitators of *Au-delà du TSA*, it must be socially acceptable to the majority of users to maximize its effectiveness. Social validity highlights the importance of collecting the views of beneficiaries regarding the social significance of the objectives, the adequacy of the procedures (in terms of ethics, cost and usefulness) and the importance of the outcomes obtained [47,48]. Participants' perception of the training and its results together with the acceptance of these objectives and procedures can influence their

motivation to commit to training [49]. Overall satisfaction with training is likewise essential for integrating its content, insofar as this is closely tied to improved commitment and adherence to the intervention [50,51]. The study of social validity makes it possible to verify the adequacy of the objectives, the acceptability of the methods and the social importance of the outcomes [48,52]. This, in turn, contributes to evaluate the relevance of the training, its perceived effects and the probability of maintaining the elements learned [53]. Based on subjective information, social validity is measured by means of standardized questionnaires or open questions [54].

Table 1: Objectives and format of facilitator training modules.

Module	Objectives	Format
Module 1	Learn the origin and development of the program. Be aware of the concept of parental competencies. Understand how the program can improve parents' competencies. Understand the program's different components. Reflect on the role of facilitator.	Asynchronous distance
Module 2	Learn the material available to facilitate the program. Learn the workshop sequence and the logic behind it. Learn the program's temporal properties. Learn the rules of group functioning.	Asynchronous distance
Module 3	Learn the expected profile of program facilitators. Name the responsibilities of the facilitator. Identify some aptitudes for facilitating a parent group.	Asynchronous distance
Complement (2 half-days)	Acquire facilitation and support materials. Own the role of facilitator. Deepen the content and development of the different group workshops.	Synchronous distance

In view of the importance of evaluating the training course [55], and considering the absence of knowledge on converting in-person training into a hybrid distance model, documenting the experience of future facilitators of the program *Au-delà du TSA* [17] regarding the implementation of this new training modality is warranted. This exploratory study documents participants' view of the hybrid (synchronous and asynchronous) distance training delivered to facilitators of the program *Au-delà du TSA* [17]. More specifically, it aims to: 1) document the relevance and usefulness of the asynchronous online content, 2) document the achievement of training objectives, 3) assess participants' sense of self-efficacy after completing the course and 4) assess participants' level of satisfaction with the training.

Methods

Design

The evaluation conducted as part of this project employs a quantitative method. Data were collected using questionnaires completed online.

Participants

Participants include stakeholders working in a health and social services establishment interested in receiving training on how to facilitate the program *Au-delà du TSA* [17]. In total, 51 francophone stakeholders (F = 50; M = 1) from 13 establishments in Quebec and 1 establishment in France took part in the research. Close to half (45.1%) were between 30 and 39 years of age.

Most (88.3%) had a university degree and worked as educators (25.5%) or psychoeducators (35.3%). Over half (53%) had less than 6 years' experience with autistic children, while over a third (35.3%) had 11 to 15 years' experience with this clientele. Nearly all participants had at least one year's experience with parents. Table 2 presents the characteristics of those who took part in the study.

Measurement

Participants completed a set of standardized questionnaires developed by the research team. A questionnaire aimed at documenting the relevance and usefulness of the asynchronous content delivered was completed at the end of each module, for a total of 3 questionnaires. Questionnaires measuring the achievement of training objectives, participants' sense of self-efficacy and their level of satisfaction with the training received were completed subsequent to the course.

The research team developed the *Fiche de présentation des participants* [Participant information sheet] to obtain the information needed to describe participants' characteristics (e.g., sex, schooling, type of employment, experience with autistic children, experience with parents, etc.).

The *Questionnaire sur l'évaluation des modules asynchrones* [Questionnaire on assessment of asynchronous modules], developed by the research team and inspired by the *Grille d'évaluation des ateliers* [Workshop assessment grid] developed by Gagnon (1998) (cited in [56,57]), aimed to assess the relevance

and usefulness of the modules offered asynchronously. It consists of 21 items to answer on a Likert scale from 1 (strongly disagree) to 4 (strongly agree), making it possible to evaluate the content (5 items), methods (4 items), facilitation (4 items), technical aspect (4 items) and impact (2 items) of the modules as well as their relevance and usefulness (2 items). A summative score was calculated for each domain.

Table 2: Characteristics of Participants (N = 51).

Characteristics	n	%
Age		
20- 29	11	21.6
30-39	23	45.1
40-49	12	23.5
50-59	5	9.8
Job title		
Educator	13	25.5
Psychoeducator	18	35.3
Psychologist	2	3.9
Social worker	8	15.7
Other (human relations agent, occupational therapist, psychometrist)	10	19.6
Education level		
Diploma of vocational studies	1	2
Diploma of collegial studies	5	9.8
University degree (certificate)	3	5.9
Bachelor's degree	19	37.3
Master's degree	20	39.2
Ph.D.	1	2
Other (university microprogram, French government diploma)	2	3.9
N° years' experience with autistic children		
Less than a year	3	5,9
5-Jan	24	47,1
10-Jun	6	11,8
15-Nov	18	35,3
16-20	0	0
Over 20	0	0
N° years' experience with parents		
Less than a year	4	7.8
5-Jan	18	35.3
10-Jun	15	29.4
15-Nov	14	27.5
16-20	0	0
Over 20	0	0

The *Questionnaire sur l'atteinte des objectifs de la formation* [Questionnaire on achievement of training objectives] was developed by the research team and consists of 15 items (e.g., "This training taught me how the program started and how it evolved over time."). Each item is measured on a 4-point Likert scale from 1(totally disagree) to 4 (totally agree). A summative score was calculated for the 15 items.

The questionnaire Teacher self-efficacy [58], an adapted version of the Nutrition Teacher Self-Efficacy Scale [59], was translated and adapted for the project by the research team to assess participants' sense of self-efficacy. The original questionnaire includes 10 items, 9 of which were retained for the current research (e.g., "How confident are you that the training adequately prepared you to facilitate the program *Au-delà sur TSA*?"). One item was removed as it was deemed irrelevant for the purposes of this study. Participants responded on a 4-point Likert scale from 1 (not at all confident) to 4 (very confident). A summative score was calculated for the 9 items. The internal reliability coefficients (Cronbach's alpha) of the variables in pre-test and post-test are the same: 0.97 [58].

The Client satisfaction questionnaire (CSQ-8), [60], translated and validated in Quebec [61], was used to assess participants' satisfaction with the training. The CSQ-8 consists of 8 items (e.g., "If one of your friends needed this kind of help, would you recommend our program to that friend?") that were evaluated using a 4-point evaluation scale. A summative score was calculated with the 8 items. The validity of the French-language version was assessed in comparison with a client satisfaction questionnaire for ambulatory psychological services (r = 0,77) and shows an adequate internal consistency with an alpha coefficient of 0.89 to 0.92 [61,62].

After the questionnaires were completed, 10 questions developed by the research team were submitted to the participants; however, only the three questions concerning the training's importance for future program facilitators and the relevance of the synchronous and asynchronous content were retained for analysis in the context of this study. These items were measured on a 4-point Likert scale from 1 (totally disagree) to 4 (totally agree).

Procedures

After the study was approved by the Psychosocial Research Ethics Committee of the CIUSSS de la Mauricie-Centre-du-Québec (MP-29-2023-621, 856) and the institutional suitability of the 14 establishments involved was verified, said establishments were contacted by a researcher to identify the stakeholders expressing an interest in training for the program *Au-delà du TSA* [17]. Once this information was obtained, a researcher contacted each party to explain the project. Participants then gave their written consent.

Analysis

Quantitative data were analyzed using the SPSS 29 software. Descriptive analyses (frequency, mean, standard deviation) were performed on the variables: relevance and usefulness of the asynchronous modules, achievement of training objectives, sense of self-efficacy and level of satisfaction with the training.

Results

Results of the descriptive analyses are presented consistent with the objectives of this study, namely: 1) document the relevance and usefulness of the asynchronous online content, 2) document the achievement of training objectives, 3) assess participants' sense of self-efficacy following completion of the course and 4) assess participants' level of satisfaction with the training.

Relevance and usefulness of asynchronous modules

Participants' assessment of the three asynchronous modules was highly positive. The descriptive analyses for all modules show average scores for the five dimensions evaluated by the questionnaires (content, methods, facilitation, impact and relevance/usefulness) varying from 92.40 to 100 out of 100 and standard deviations of 0.1.16. More specifically, "Content" obtained a mean score of 19.74 (SD=0.41), which represents 98.69% of the total score, indicating that the participants judged that the themes covered in the three modules were relevant and useful and the content was clear and interesting. The mean score for "Methods" was 15.46 (SD=0.75), which represents 96.65% of the total score, demonstrating both the usefulness and effectiveness of the learning activities and the relevance of the material accompanying the presentation. Regarding "Facilitation", the mean score was 15.43 (SD=0.64), representing 96.45% of the total score. Thus, participants felt that the presenters were dynamic and provided relevant and useful explanations. For "Technical aspects" the mean score obtained was 15.50 (SD = 0.61) for all three modules, which corresponds to 96.90% of the total score. Participants maintained that the module format held their interest and that the rhythm and audio-visual quality was adequate. The mean score for "Impact" was 7.59 (SD = 0.46) for all three modules, or 94.85% of the total score, indicating that the participants considered they had learned useful information and could put it into practice. The mean score for "Relevance and usefulness" was 7.86 (SD = 0.35). This represented 98.20% of the total score and revealed the relevance and usefulness of the synchronous modules according to the respondents.

Achievement of training objectives

Regarding the achievement of training objectives (asynchronous module and synchronous distance training), the mean score was a high 53.40/60 (SD = 4.64) (6 participants did not reply to the questions). Table 3 shows that all items obtained a mean score higher than 3.22 out of a maximum of 4. The item with the highest mean score and the lowest standard deviation concerned knowledge of the origin and development of the program *Au-delà du TSA* (M = 3.87, SD = 0.34). In contrast, the item on appropriating the role of program facilitator obtained the lowest mean score (M = 3.22, SD = 0.56). More specifically, analysis of the items reveals that almost all participants (86.7% to 100%) somewhat agree or totally agree with all the statements on the questionnaire. To put it differently, they mainly totally agree that the training allowed them to know the program's origin and development (86.7%), understand how it could improve

parents' competencies (77.8%), and get to know its temporal properties (71.1%), the rules of group functioning (71.1%) and the responsibilities of the facilitator (66.7%). No participant indicated disagreement. Regarding facilitation (somewhat agree or totally agree), the proportion of responses was more balanced. Participants felt the training allowed them to discover the expected profile of program facilitators (42.2%, 57.8%), identify aptitudes conducive to working with a parent group (46.7%, 53.3%) and reflect on the role of facilitator (48.9%, 51.1%). The training also allowed 93.3% (64.4%, 28.9%) of the participants to appropriate the facilitator's role.

Table 3: Mean Scores and Standard Deviations of Items Measuring Achievement of Objectives (n = 45).

Items	M	SD
This training allowed me to the program's origin and development.	3.87	0.34
This training allowed me to understand how the program can improve parents' competencies.	3.78	0.42
This training allowed me to know about the program's different components.	3.76	0.48
This training allowed me to know the rules of group functioning.	3.71	0.46
This training allowed me to know the program's temporal properties.	3.69	0.51
This program allowed me to know a facilitator's responsibilities.	3.67	0.48
This training allowed me to know the workshop sequence and the logic behind it.	3.6	0.58
This training allowed me to know the expected profile of a program facilitator.	3.58	0.5
This training allowed me to identify certain aptitudes for facilitating a parent group.	3.53	0.51
This training made me aware of the concept of parental competencies.	3.51	0.55
This training allowed me to reflect on the role of facilitator.	3.51	0.51
This training identified the materials available to me to facilitate the program.	3.47	0.63
This training allowed me to appropriate the materials available to me to facilitate the program.	3.27	0.69
This training allowed me to deepen the content and development of the different group workshops.	3.24	0.65
This training allowed me to own my role as a facilitator of the program Au-delà du TSA: des compétences parentales à ma portée.	3.22	0.56

Note : Minimum = 1; Maximum = 4

As regards knowledge and understanding of the program, over 7 respondents out of 10 totally agree the training allowed them to understand the program's different components (77.8%) and temporal properties (71.1%). Most also said they totally agree they learned about the workshop sequence and the logic behind it (64.4%) as well as the materials available to facilitate the program (53.3%). As for the deepening of the content and appropriation of the facilitation materials, although most respondents somewhat agree and totally agree that the training allowed them to deepen the content and development of the different workshops (53.3%, 35.6%) and to appropriate the facilitation and support materials available to them (46.7%, 40.0%), the proportion of participants who somewhat disagree is 11.1% and 13.3%, respectively.

Sense of self-efficacy after training

Participants' sense of self-efficacy regarding facilitation of the program *Au-delà du TSA* after training, is also high (M = 29.33/36, SD = 3.29). Table 4 shows that the mean score for each item is higher than 3.10/4. The statement presenting the highest mean score (M = 3.55, SD = 0.50) refers to participants' confidence in their ability to distinguish to each parent's reality. The statements rated lowest correspond to their confidence regarding knowledge of the program (M = 3.10, SD = 0.54) and the possibility to facilitate it (M = 3.10, SD = 0.58), with this last presenting the highest standard deviation. More specifically, all participants say they are fairly confident (45.1%) or very confident (54.9%) in their ability to distinguish each parent's reality and, except for one person, fairly confident (43.1%) or very confident (54.9%) about their knowledge of ASD. Almost all are fairly confident or very confident about their understanding (58.8%, 37.3%) and knowledge (70.6%, 19.6%) of the program in terms of having the competencies and training needed to facilitate it (66.7%, 27.5%) and that the training they received was adequate (64.7%, 27.5%) or sufficient (74.5%, 19.6%) for this purpose. A substantial number are fairly confident (66.7%) or very confident (25.5%) in their ability to transmit the information in the program. A high

proportion of participants are fairly confident (66.7%) or very confident (21.6%) they can facilitate the program, while 11.8% do not feel really confident in this regard. Overall, although no participant answered they were not at all confident, slightly less than 12% feel not really confident, with the proportion varying from 2% to 11.8% depending on the item.

Table 4: Mean Scores and Standard Deviations of Items Measuring Participants' Sense of Self-Efficacy (N = 51).

Items	M	SD
How confident are you in your ability to distinguish each parent's reality?	3.55	0.5
How confident are you about your knowledge of autism spectrum disorder?	3.53	0.54
How confident are you about your understanding of the program Au-delà du TSA?	3.33	0.55
How confident are you that you possess the competencies and necessary training to facilitate the program Au-delà du TSA?	3.22	0.54
How confident are you that you received adequate training to facilitate the program Au-delà du TSA?	3.2	0.57
How confident are you in your ability to transmit the knowledge connected with the program Au-delà du TSA?	3.18	0.56
How confident are you that you received sufficient training to facilitate the program Au-delà du TSA?	3.14	0.49
How confident are you that you can lead the program Au-delà du TSA?	3.1	0.58
How confident are you about your knowledge of the program Au-delà du TSA and its application with parents?	3.1	0.54

Note: Minimum = 1; Maximum = 4.

Participants' level of satisfaction with training

Participants' level of satisfaction with the training was very high, scoring an average of 29.02/32 (SD = 2.92). All items present an average higher than or equal to 3.48/4, with standard deviations varying from 0.38 to 0.53. The item concerning the recommendation of the program to peers obtained the highest average but also the lowest standard deviation (M = 3.78, SD = 0.38). Conversely, the item on level of satisfaction scored lowest, and the standard deviation was among the highest (M = 3.48, SD = 0.52).

Finally, almost all (91.7%) 48 respondents (3 participants did not reply to the questions) totally agree that training is essential for future facilitators of the program *Au-delà du TSA*. Questioned about the relevance of the course content, all participants save one agree that the asynchronous content is relevant; in this regard, most (68.8%) agree while 29.2% totally agree. As for the synchronous content, all participants consider the content to be relevant as well, but over a third (35.3%) agree and the majority (64.4%) totally agree. Furthermore, a substantial number of the respondents feel that the training includes sufficient asynchronous (93.7%) and synchronous (81.2%) content; however, almost one in five respondents (18.8%) maintains there is not enough synchronous content.

Discussion

Overall, research results indicate that participants in this training evaluate the relevance and usefulness of the asynchronous content very positively. When designing education in the digital age, content identification requires thinking that ensures it contributes to achieving targeted objectives [63]. The results obtained testify to the participants' favorable perception of the relevance and usefulness of the content transmitted in the asynchronous training modules, allowing us to validate the choices made when the course was designed.

With most indicating they totally agree with the items, the participants positively evaluate the achievement of synchronous and asynchronous training objectives. Although these results are positive, certain objectives obtain lower results: they are those regarding appropriation of materials and the facilitator's role or deepening of content. It's important to note here that the course is designed for future facilitators of a program for parents of young autistic children. In addition to training, facilitators have access to documentation that includes three separate support guides: for facilitators, for intervention workers in charge of follow-up, and for parents. These guides are made available to facilitators after training is completed. Their purpose is to ensure a solid understanding of the program and support its implementation consistently and in compliance with standards [17]. Bates [63] mentions that the designer must determine whether the content should be taught, or whether learners need to know where they can find the information and when to use it. To this effect, the content available in these guides is not described in detail within the context of training.

A summary of their structure, contents and usefulness in the program's deployment is, however, presented during asynchronous and synchronous training. Participants are therefore invited to consult them as part of post-training appropriation. The somewhat lower results regarding the appropriation of facilitation and support materials can, notably, be explained by this fact. In terms of the deepening of workshop content and the appropriation of the facilitator's role, it's possible the program's implementation and the concrete use of facilitation materials

represent a post-training approach that will increase participants' sense of having achieved these objectives. Moreover, the course description specifies that an appropriation process is required subsequent to training. Bates [63] argues that learners need practice to acquire a particular skill. The fact that questionnaires were administered after the course and the participants did not have time to appropriate and use the workshop contents and facilitation materials may therefore have impacted their evaluation of achievement of these objectives.

Participants positively evaluated their sense of self-efficacy, stating that most of them were fairly confident about facilitating *Au-delà du TSA* after they completed training. Certain items scored a bit lower, however, namely, those having to do with confidence about facilitating the program and confidence in their knowledge of the program and its application with parents. These two items refer implicitly to the implementation of *Au-delà du TSA* with parent groups. Now, the integration of competencies in a particular context represents a major challenge. Implementing a new practice, such as a program, calls for collaboration by different actors. A methodical approach to organizational change through the implementation of management structures and mechanisms can significantly increase the probability of success [64].

Additionally, Bissonnette et al. [26] identify the quality of managers' support and engagement as the key elements of a quality implementation. To this effect, the description of *Au-delà du TSA* indicates that updating the program calls for collaboration by actors sharing four major types of function: management, facilitation, individual monitoring and supervision [17]. Thus, there's reason to believe that the lower scores for the two items point to complexity in terms of applying a new practice and the conditions conducive to implementing the program in their respective establishments. Several approaches must then be planned in participants' establishments following the course to ensure the program is properly implemented. In this regard, facilitators are the only actors who have benefited from training; however, although trainers can answer certain questions sent them by facilitators, no post-training support is planned. Note here that this support for learners is an essential component of an effective learning environment [63] and the implementation of a new practice [65].

Although participants' satisfaction with training is evaluated very positively, almost one in five would have liked more synchronous content from trainers. This fact is consistent with the findings of a study conducted with students reporting that synchronous interaction with the professor, lecture-style, is an important contribution to students' level of satisfaction with a course [30]. Other studies underscore the importance of planning moments of interaction between trainers and learners to better support and engage learners regarding training [38,40,41,44]. As well, it's important to point out that the two trainers are facilitators of the program Au-dela du TSA; thus, their related expertise and experience represents a significant contribution. These synchronous moments therefore allowed participants to exchange with experienced individuals offering concrete examples of the program's implementation.

Overall, participants' high level of satisfaction with hybrid training (synchronous and asynchronous) is encouraging, since it can have a major impact on their commitment and adherence [50], thus improving the probabilities of successful implementation. This, in turn, will increase support to parents by enabling access to a program designed specifically for their needs.

Conclusion

The results of the present study supplement those of the scientific literature regarding the effectiveness of distance training [17,40,41] by demonstrating that such effectiveness is possible when in-person training is transposed to hybrid distance training. In short, it appears that asynchronous content is both relevant and useful and the objectives of synchronous and asynchronous training are achieved. Additionally, it appears that the participants feel confident they can facilitate the program *Au-delà du TSA* after completing the course and are satisfied with the training given.

The present study has certain limitations. To begin, the participants' profile is fairly homogeneous: most have few years of experience with autistic children; for example, no participant has more than 16 years of experience with autistic children or the parents of autistic children. Moreover, because of the lack of randomization of participants, the sample's representativity cannot be ensured and the results cannot be generalized. More research is needed on the effectiveness of transposing in-person training to hybrid distance training. Based on this study's findings, certain adjustments can be made to the course; for example, help future trainers to further appropriate material and increase the number of synchronous sessions. Finally, it would be interesting to better understand the specific variables contributing to the success of this transposition.

Declaration of Conflicting Interests

The authors declare that they have no potential conflict of interest regarding this work.

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