Evaluation of a group webinar and individual video-conferencing support program designed to upskill staff working with children with autism in regional and remote areas.

Original Article – Research Paper

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Declarations

Conflicting interests

The authors declare that they have no conflicting interests and do not have any financial interest or benefit from the direct applications of this research.

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Ethical approval

This study received Human Research Ethics Committee approval [2015/622] at the University of Sydney on the 4th August 2015. Participants gave written consent to participate in the current study.

Guarantor

GJ

Contributorship

All authors contributed to conception and design of the current study. GJ and ML undertook data acquisition. GJ, ML, AB, KB, and DC contributed to analysis and interpretation of data. GJ drafted the manuscript. All authors were involved in the critical revision of the manuscript.

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Abstract

Purpose. The rollout of individualised disability funding in Australia resulted in an increased demand for services for people with a disability, particularly support for the high percentage of Australians with autism spectrum disorder. Continuing professional development is one way to grow and maintain a skilled workforce, however face-to-face opportunities can be limited in remote areas of Australia. Technology may provide a low-cost and widely accessible platform for providing education and support for staff in these areas.

Design/methodology/approach. The current study evaluated a novel webinar training and individual online support program for 36 allied health, education and community support staff. Data were collected via a survey on changes in perceived ‘knowledge and skills’ and ‘confidence’ in supporting children with autism, as well as mode of participation, and accessibility of the program.

Findings. Participants reported a significant increase in their ‘knowledge and skills’ and ‘confidence’, in working with children with autism. This increase was positively related to the number of webinars the participants accessed. The mode of webinar access was predominantly via watching recordings of webinars (asynchronous learning). Synchronous learning via individual online sessions was accessed by a small number of participants, mostly allied health professionals. Workload and scheduling were identified as barriers to engaging in the program. The technology platform was found to be accessible and acceptable.

Originality A predominantly asynchronous mode of delivery was successful, thereby increasing program access and flexibility for remote staff. Technology was not a barrier to accessing the program regardless of remoteness or job role.

Keywords

Autism; tele-health; training; education; webinar; video conferencing; regional and remote, professional development, allied health, disability

The rollout of individualised disability funding in Australia under the National Disability Insurance Scheme (NDIS) from 2016 to 2020, has resulted in increased demand for services for regional and remote Australians with a disability (National Disability Services, 2019). This was expected to drive growth in the number of service providers operating in these areas (National Disability Services, 2017). With significant growth in any sector, there often comes challenges. One of the main challenges will be maintaining and growing a skilled and experienced workforce to keep up with the increased demand for disability-related support services. Autism spectrum disorder (Autism) is the most prevalent primary diagnosis of participants entering the scheme, representing 35% of 0-6 year olds and 60% of 7-14-year olds (National Disability Insurance Agency, 2018). Autism is characterised by difficulties in social communication, and the presence of atypical patterns of behaviour (American Psychiatric Association, 2013). Individuals on the autism spectrum respond well to environments that are structured, predictable and adopt a positive approach to managing challenging behaviours (Prior and Roberts, 2016). Having knowledge in these structured supports can be vital in the success of a child's early intervention program and subsequent placement in an educational setting. Researchers have also suggested that the lifelong cost of supporting an individual with autism can be reduced by up to two thirds with early identification and intervention (Järbrink, 2007). Therefore, access to autism-related education and support in the early years is crucial.

Continuing professional development (CPD) is one way to build capacity across disability and mainstream sectors to support individuals with autism. Face to face access to opportunities however, can be limited in regional and remote areas in Australia, where staff may travel more than three hours to access workshops or CPD events and few receive regular face-to-face supervision or support in their roles (Johnsson et al., 2016). In order to overcome these barriers, researchers suggest that innovative models of delivering CPD, including the

use of technology to improve accessibility, collaboration, and frequency of professional education and support, should be trialled (Dew et al., 2012; Keane, Lincoln and Smith, 2012; Serna et al., 2015).

Online learning is the use of modern information technology to deliver training and support programs to professionals in remote locations (Dudding, 2009). Online learning can be further broken down into two modes of delivery and participation. Asynchronous training programs occur at the time and pace of the student and do not rely on an instructor for online course delivery. Examples include email, discussion forums, blogs and websites, learning management systems, such as Moodle™ or BlackBoard™ and watching pre-recorded videos or webinars. Synchronous training programs require both the instructor and student to be simultaneously present during online delivery. Video and/or audio conferencing are the most common platforms through which synchronous training programs occur.

Synchronous online learning programs have been used as a successful education and support tool for parents and staff delivering early intervention programs to children with autism. Two major examples include training caregivers and staff in the principles and procedures of Applied Behaviour Analysis (Alnemary et al., 2015; Heitzman-Powell et al., 2014; Lindgren et al., 2016; Machalicek et al., 2010; Pantermuehl and Lechago, 2015), and the implementation of the Early Start Denver Model (Vismara et al., 2013; Vismara, Young and Rogers, 2012; Vismara et al., 2009). When compared to in-person models of training, studies found no differences in child treatment and learning outcomes between modalities (Pantermuehl and Lechago, 2015; Vismara et al., 2009).

Several studies have investigated combining asynchronous and synchronous modes of delivery, as it has been suggested that different types of communication may promote different types of learning and participation (Hrastinski, 2007; Wellman and Haythornthwaite, 2002). Vismara et al. (2009) combined live seminars and team supervision

along with self-instruction DVD's to train therapists to implement the Early Start Denver Model, an intervention program for treating young children with autism. They found that the synchronous elements (seminars and supervision) were necessary to improve the therapists' skill use. Similarly, in a combined web-based training and live coaching program for parents, researchers found that the live component with therapists was highly important for understanding how to implement the strategies from the web-based training into the child's daily life (Hrastinski, 2007; Vismara et al., 2013; Wellman and Haythornthwaite, 2002). Baharav and Reiser (2010) further suggested that gains obtained in traditional face-to-face therapy can be maintained and even exceeded in a treatment model that uses synchronous online training for caregivers and staff supporting the child.

The benefits of using technology to deliver professional education and development include lower costs (Hay-Hansson and Eldevik, 2013; Lindgren et al., 2016), reduction in travel time (Heitzman-Powell et al., 2014), and greater access for disability workers, especially in regional and remote regions where they may be in short supply (Gallego et al., 2015; Johnsson et al., 2016). Professional isolation may also be addressed using online mentoring and network development, especially for early career staff in regional and remote locations (Dew et al., 2012). As the demands for NDIS-funded services and supports increase, these benefits would allow staff to be upskilled without being removed from their roles for long periods of time. Access to combined synchronous and asynchronous professional development programs would have the added benefit of allowing staff to access learning at a time that suits their schedule.

While using technology as a way of learning can be beneficial, several barriers must also be considered. Access to equipment and training and access to a reliable internet connection have been reported as barriers to the use of technology (Moffatt and Eley, 2011). Other barriers are related to individuals' preferences for the traditional face-to-face approach

and lack of knowledge of technology-based programs (Chedid, Dew and Veitch, 2013; Johnsson et al., 2016; Moffatt and Eley, 2011). In their comprehensive guidelines for developing telehealth services and troubleshooting problems, Lee et al. (2015) suggested addressing such issues in connectivity, hardware and software at the outset to determine suitability, while other researchers insist on providing appropriate training and technical support throughout (Tipton et al., 2011). Hines et al. (2017) also re-iterated in their tele-practice guidelines that technology is simply the vehicle for delivery and the skill and quality of the facilitator is more important for success.

Overall, the literature to date exploring the use of online, autism-specific training programs has been limited to specific target groups (i.e., allied health or education professionals, or parents) and target approaches (i.e., Applied Behaviour Analysis, Early Start Denver Model). There is currently no investigation of the effectiveness of an online training and support program delivering a broad range of autism-specific topics to a wide variety of participants including allied health, education, and social and community workers in regional and remote areas.

The aim of the current study was to conduct a pilot study of a novel online training and individual support program delivered to a broad range of staff across a large geographical area. The research questions were as follows:

- (1) Was there a difference in perceived 'knowledge and skills' and 'confidence' in supporting children with autism following the program, and did these differ (a) between job groups, (b) between level of remoteness, and/or (c) with additional individual online support?
- (2) Was there a relationship between number of webinars viewed and changes in perceived knowledge and skills, and confidence?

- (3) How did participants engage in the program i.e. synchronously through live webinars and individual online sessions and/or asynchronously through webinar recordings. Were there any differences in overall webinar participation (a) between job groups, (b) between level of remoteness, and/or (c) when receiving additional individual online support?
- (4) Was the technology used in the online program accessible, and was the program content valued and useful across job roles?

Methods

This study received Human Research Ethics Committee (HREC) approval [2015/622] at [INSERT AFTER BLIND REVIEW] on 4 August 2015.

Program Information

The Building Connections program was funded by the Australian government to build capacity in western New South Wales (NSW) staff to support children with autism under the incoming NDIS. NSW is Australia's most populous state with 7.48 million residents, 3.8% of which live in western NSW across a land mass of approximately 26 million hectares (Australian Bureau of Statistics, 2015).

Building Connections used Adobe Connect® to deliver online interactive webinars and individual support. Based on the results of the needs analysis, a total of 18 webinars were co-developed by an experienced, multi-disciplinary team including a speech pathologist, occupational therapist, teacher, and psychologist for quality assurance. This team then delivered two consecutive series of the webinars, each across a 12-month period focussing on a broad range of topics identified in the needs analysis (Johnsson et al., 2016). A webinar was delivered every three weeks on a Thursday from 1pm - 2pm with some variations during school holidays. Each participant was required to have their own login and password to access the online platform.

During the collaborative webinars, participants logged in using their web browser and were taken through a practical discussion on the webinar topic (synchronous learning).

Participants were free to ask questions at any time throughout the webinar and engage in discussion surrounding the topic with the host and other participants. Participants were also able to access a recording of the webinar at another time using their login and password if they were unable to attend the live webinar or wanted to review the material (asynchronous learning).

Participants were randomly assigned to one of two groups halfway through the 12-month program. Group one was offered additional individual online support sessions (synchronous learning) with a frequency of up to one hour every three weeks for the remaining six months of the program. Group two continued to access the group webinar program alone.

During individual online support sessions, participants were able to set an agenda or engage in free discussion regarding previous workshop content, their current caseload, or questions they may have around other topics or specific children and families with whom they were working. Participants were also able to request discipline specific support within their own discipline (speech pathologist, occupational therapist, teacher, psychologist).

Participants

Individuals were invited to participate in the program and research study if they were in a role where they work with children with autism and/or developmental delay (0-8 years), and lived in the western region in the Australian state of NSW. Researchers met with local school administrators, disability and allied health services, and community support services in the targeted funding region to discuss the content, suitability and technology requirements of the novel online training and support program. A participant information and consent form was distributed in-person or via email. Interested participants returned the consent form to

researchers via email. A total of 102 people registered for the online program and of these, 36 participants completed both the pre-and post-survey.

Remoteness classification. Geographical location was calculated and classified according to the Australian Standard Geographical Classification–Remoteness Area system (Australian Bureau of Statistics, 2016). The system includes five classifications: (1) major cities, (2) inner regional, (3) outer regional, (4) remote, and (5) very remote.

Measures

We used an online survey via Survey MonkeyTM to collect data pre- and post-program.

Demographic data was collected in both surveys including gender, age range, education, area of residence and years lived in this area, job role, years worked in current role and years intended to remain in role.

At the time of design, it was determined that a purpose-built survey be adapted from the needs analysis conducted by Johnsson et al. (6) on a similar participant group in regional and remote NSW. The survey was developed to gather meaningful responses relating specifically to the broad range of topic-related content within the online training and support program. Based on this, the measures of perceived ‘knowledge and skills’ and ‘confidence’ comprised 25 questions scored on a 5-point Likert scale (1= strongly disagree; 5= strongly agree). ‘Knowledge and skills’ was operationally defined as the degree to which a participant felt that they had understanding of, and ability to implement, targeted strategies to support children with autism and their families. ‘Confidence’ was operationally defined as the degree to which a participant felt confident in their role supporting children with autism and their families in a variety of support areas. Higher scores on these measures indicate higher levels of perceived “knowledge and skills’ and ‘confidence’. (See Appendix 1 for ‘knowledge and skills’ and ‘confidence’ survey questions). To ensure clarity of survey questions, the authors used the Validation Rubric for Expert Panel (White and Simon, 2015) to determine that the

questions were balanced, did not overlap, limited the use of jargon and technical language and were sufficient to answer the research questions, and obtain data relevant to the purpose of the study. To investigate face and content validity, the survey was iteratively reviewed by two research team members and was deemed as a reasonable way to gain the required information and reflected the specific intended domain of content; autism-specific ‘knowledge and skills’ and ‘confidence’ as related to the training program. Finally, the scales had good internal consistency, with a Cronbach alpha coefficient of .77 for Confidence and .92 for Knowledge and Skills (Pallant, 2016).

Participation in the online program and information on the participants experience with the technology was collected in the post-program survey. For each webinar the participant had attended, they were asked to select from ‘Attended Live’ or ‘Watched On-line later’. Participants responded ‘yes’ or ‘no’ as to whether they had been offered and engaged in individual online support sessions. Those that engaged were asked an additional four questions rating their experience of the individual online sessions on a 5-point Likert scale (1= strongly disagree; 5= strongly agree). Those that did not engage were asked to provide a comment on their reason for not taking up the individual online support. To evaluate the technology, and value and usefulness of the program content, four questions were included in the online survey asking participants to rate the above on a 5-point Likert scale (1= strongly disagree; 5= strongly agree).

Statistical analysis

Statistical Package for the Social Sciences (SPSS) version 24 was used for statistical analyses (IBM Corp, 2016). Exploratory statistical analysis was conducted prior to analyses to check assumptions were met. The pre- and post-scores on measures of perceived ‘knowledge and skills’ and ‘confidence’, were converted into single difference scores. All variables met the assumption of normality using the Kolmogorow-Smirnov test ($p > .05$). Cases were excluded

pairwise if they were missing data for a specific analysis. Job roles were sorted into three groups; 1) Allied Health, 2) Education, and 3) Social and community work.

A paired samples t-test was used to measure differences from pre- to post-program on measures of perceived 'knowledge and skills' and 'confidence' for the total sample. A Wilcoxon Signed Rank test was used to measure differences from pre- to post-program on measures of perceived 'knowledge and skills' and 'confidence' for each condition (group webinars plus individual online sessions, and group webinars alone). Where effect sizes were calculated, Cohen's *d* was used (Cohen, 1988) and interpreted as .2=small effect, .5=moderate effect, .8=large effect. A one-way between groups analysis of variance (ANOVA) was used to measure whether job role or level of remoteness had an impact on the differences from pre- to post-intervention for the total sample.

A Pearson product-moment correlation coefficient was used to investigate the relationships between number of webinars viewed and measures of perceived 'knowledge and skills', and 'confidence' in supporting children with autism. Preliminary analysis was performed to ensure no violation of the assumption of normality, linearity and homoscedasticity.

Webinar attendance and individual online session outcomes was tallied and reported descriptively.

Results

Participants

Participation in the program and research was voluntary and it is unknown the extent of participation of those who did not complete the post-survey. Possible reasons for perceived attrition include program drop out, lack of time to complete survey, changing jobs, changing email addresses (point of contact), changing work sectors, and moving out of the area. To investigate the impact of this, a missing data analysis was performed on the groups to check

for significant differences. A chi-square test for independence indicated no significant association between completing the post-survey and participant age ($\chi^2 (2, N=102) = .025, p = .99$), job role ($\chi^2 (2, N=102) = 2.21, p = .33$), or regional or remote residential location ($p = .99$, Fisher's exact test). An independent samples t-test also confirmed there were no significant differences between groups in pre-survey scores on perceived knowledge and skills ($t (100) = 1.36, p = .18$) or confidence ($t (100) = 1.39, p = .17$) in supporting children with autism. Participant information is summarised in Table 1.

[Table 1 here]

Perceived knowledge and skills, and confidence

There was a statistically significant increase in perceived 'knowledge and skills' from pre-program ($M=3.41, SD=.49$) to post-program ($M=4.1, SD=.45$) (*Mean difference* $D=.64, SD = .50$), $t(34) = 7.41, p = .000$ for the total sample. There was also a statistically significant increase in perceived 'confidence' from pre-program ($M=3.7, SD=.38$) to post-program ($M=4.11, SD=.42$) (*Mean difference* (D) = $.40, SD = .33$), $t(34) = 7.17, p = .000$ for the total sample. The mean increase in scores was .64 in 'knowledge and skills' with a 95% confidence interval ranging from .46 to .81, and an increase of .40 in 'confidence' with a 95% confidence interval ranging from .29 to .52. The Cohen's d for confidence (1.46) and 'knowledge and skills' (1.03) indicated a large effect size for both. There were no statistically significant differences found within the above results between job groups (allied health, education and social work) or levels of remoteness.

Both conditions, including group webinars plus individual online sessions, and group webinars alone, were found to have a statistically significant increase in perceived 'knowledge and skills' and 'confidence' from pre-program to post-program. See Table 2.

(Table 2 here)

There was a moderate, positive correlation between the number of webinars viewed and both knowledge and skills ($r = .46$, $N = 30$, $p = .011$), and confidence ($r = .39$, $N = 30$, $p = .033$),

Mode of webinar access

Overall, 30% ($N=132$) of webinar viewings were live at the time of the webinar while 70% ($N=302$) were viewed by accessing the recording online at a later time. This disparity increased over time. Data extracted from Adobe Connect© revealed significantly higher viewing rates of recorded webinars ($N= 1788$), however this data is not included in the analysis as participants in the current sample were not tracked when they logged in. There were no statistically significant differences found between job roles or level of remoteness on overall rate of webinar access in the current sample (synchronous and asynchronous). On average, those participating in individual online sessions accessed more webinars ($M=15.14$, $SD=4.36$) than group webinars alone ($M=11.08$, $SD=5.31$). See Figure 1 for webinar viewing rate and modality.

(Figure 1 here)

Individual online support sessions

Eight participants engaged in one or more individual online support sessions from mid-way through the 12-month program. These participants included three speech pathologists, two occupational therapists, two psychologists and two educators. No social and community workers opted to engage in the individual online support sessions. All individual online support sessions involved case discussion and five participants requested assistance in Positive Behaviour Support. Other requests for support included toilet training, social skills and discipline specific support (e.g. speech pathologist or occupational therapist). Figure 2 outlines the reported outcomes of the individual online sessions for the participants who did engage.

(Figure 2 here)

Participants who declined the offer of individual online sessions were asked to provide comments in the survey as to why they did not engage. The majority of responses indicated they were unable to fit it into their work schedule.

I was offered the opportunity but due to work commitments and schedules I could not use them. But in the future, would like further opportunities to seek 1:1 sessions.:

Community Worker.

With lead in to NDIS, workload changed and could not get to ... sessions.: Case Manager.

Difficulties in finding time with the roll out of the NDIS and dealing with all the changes in the work demands.: Educator.

Other reasons included changing jobs, no current clients to discuss and already having supervision in place.

Access and support via technology

In terms of technology, 85% ($N=28$) of participants agreed that they found the process for logging onto the webinar simple and easy to do, and 82% ($N=27$) of participants also agreed that they found the audio quality was acceptable when attending or watching the webinars. Finally, 94% ($N=31$) agreed that they were able to gain valuable information from the presenters and 90% ($N=28$) of participants agreed that this information was useful to them in their role.

Discussion

The current study aimed to evaluate an online group webinar and individual online support program designed to educate and build capacity in regional and remote staff to support children with autism. Overall, the program was reported to be beneficial in increasing the reported knowledge, skills and confidence of a diverse range of staff in regional and remote

communities who were supporting children with autism. Pre-program data in the study indicated that the respondents did not agree nor disagree that they had the skills and knowledge, and confidence to support young children on the autism spectrum and their families. By post-program, however, the respondents reported increased self-reported 'knowledge and skills' and 'confidence', in working with children with autism in their care across a range of support areas. It was also found that higher rates of participation in the program were related to greater gains in perceived 'knowledge and skills' and 'confidence'. The program was found to be beneficial for a range of staff who participated, with backgrounds in allied health, social and community work, and education. These positive results indicate that there is a potential for increased access to staff in regional and remote areas who feel confident and knowledgeable in supporting children on the autism spectrum during the crucial early intervention years when specialist support may be limited.

Another promising result was that the program was reported to be beneficial across all study conditions of remoteness. All participants, from inner regional to very remote locations reportedly participated similarly in the program and increased in their self-reported 'knowledge and skills' and 'confidence' at a similar rate regardless of their location.

Overall, webinar participants predominantly used an asynchronous learning mode (watching webinar recordings) rather than synchronous (watching webinars live). While Vismara et al. (2009) recommended the synchronous component as necessary in learning outcomes, in our study sample where the majority of participants accessed an asynchronous mode of delivery, we found positive results were still able to be achieved. Some of the challenges in working in regional and remote areas often surround being time poor due to driving long distances, heavy caseloads, and staff shortages (Dew et al., 2012; Veitch et al., 2012). The program was based on a needs analysis indicating a need for autism-specific education and support to be accessible for participants and potentially delivered via

technology (Johnsson et al., 2016). Further, with the increasing demands of the NDIS, the prioritisation and ability to fit in training programs by staff remains an issue that will need to be explored. However, as our study found that access to the asynchronous component of the program was effective for regional and remote staff who may be experiencing high caseloads and limited time to devote to professional development activities, this may help to address these challenges in delivering training and support to regional and remote areas.

Professional development is a choice made by many professionals, however managers and school principals are also in a position to encourage prioritisation of training and support programs which are designed to improve their staff's practice with clients and students in their setting. Therefore, rather than targeting individual staff members, programs that are endorsed by managers and school principals may have a more significant effect on registration and participation rates. The implementation of staff training entitlements funded as part of the NDIS (Parliament of Australia, 2018), may also go some way to mediate issues of prioritisation as demand continues to increase, and as a way to ease the burden on managers and principals in releasing staff from work duties to attend.

Synchronous learning was also offered via individual online support sessions. Despite the reported benefits from those who chose to participate, these sessions were accessed by a small number of individuals, of which 75% were allied health professionals. Allied health services have seen the most consistent growth under the NDIS (National Disability Insurance Agency, 2018), and therefore the individualised support component of the program may be most beneficial for this sub-group of regional and remote staff. We also reported that two of the participants who engaged in the individual sessions used this time to seek support from a therapist within their own discipline. As suggested by Dew et al. (2012), this may be useful in reducing levels of professional isolation in remote areas. It may be suggested that the lack of community support workers engaging in individual sessions could be due to a more varied

caseload of individuals with, and without, a diagnosed disability. The individual session content was consistent with findings from the needs analysis by Johnsson et al. (2016) in that support for managing behaviours of concern was the most prevalent request for support. Unsurprisingly, busy work schedules were reported as a barrier to accessing individual online sessions across all disciplines. As funding and demand for services increase, alternative methods of individual consultation should be considered to fit in with these schedules such as supporting the staff member live during face-to-face client sessions or during staff meetings. Future implementation of the program may also include varying the delivery of the program to include an audio version while travelling, and varying the time of day in which the webinars and individual online sessions are offered including an after-work hours option.

Research delivered in real world settings often comes with its own set of limitations. The current evaluation is based on a subset of the overall group of participants enrolled in the program, whose experience of working with children on the autism spectrum was unknown. While the current study aimed to minimise the impact of participant attrition through a missing data analysis, final results should be interpreted with caution due to the sample size and difficulties experienced with following up the total sample at post-program. Additionally, as the current study could not exercise control over participants access to other information via the internet, their peers, or other professional development, we cannot entirely attribute positive outcomes to the program alone. Self-report measures on skills, knowledge and confidence may also be limited in their measurement of the translation of participant learning to behaviour. Future studies based on the application of the Kirkpatrick Model (Kirkpatrick, 1994) which evaluates the reaction, learning, behaviour, and results of a training program may be a way to effectively bridge this gap.

Regarding technology, we found the online platform was considered both accessible and valuable. Participants indicated that they were able to access the technology with ease

and found the audio quality acceptable. While certain barriers such as local access to equipment and reliable internet could not be solved by the program staff (Moffatt and Eley, 2011), the current program offered technology training and troubleshooting, as suggested by Tipton et al. (2011), prior to starting in order to reduce these barriers. With such a diverse group of staff in many different roles in the community, it was promising to see that the majority of participants found the information valuable and useful in their current role.

Conclusions

Overall, these findings suggest that the use of technology is an acceptable and beneficial method of delivering autism-specific professional education and development for the diverse range of staff in regional and remote areas. While past research has indicated that both synchronous and asynchronous learning modes are vital in its success, the current study found success with a predominantly asynchronous learning mode. Targeting allied health staff for individual support sessions may also make the best use of this resource. The impact of such a program will contribute to greater capacity in local educators, social workers, and allied health professionals to provide timely autism-specific early intervention support at a time when it is most critical. Especially at a time when the full implementation of the NDIS is driving up demands for existing services. Future researchers should consider further comparison of delivery modes, measuring the translation of learning to behaviour and results, as well as innovative ways in which to deliver individual support sessions to fit in with busy workload schedules. Finally, further investigation may be warranted on delivering online synchronous Positive Behaviour Support services.

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Figure Titles and Legend**Fig. 1.**

Webinar viewing rates. Data collected on asynchronous and synchronous webinar viewing over the 12 month, 18-webinar topic program. 70% of webinar viewing was asynchronous with the difference between attendance modes increasing over time.

Fig. 2.

Outcomes of the individual online support sessions. Participant response data indicated those who engaged, benefited from individual online support sessions.

Table 1.

Participant information (N = 36)

Gender	<i>N</i> (%)
Male	1 (2.8)
Female	35 (97.2)
Age	
21 - 30 years	11 (30.6)
31 - 40 years	7 (19.4)
41 - 50 years	10 (27.7)
51 - 60 years	6 (16.6)
Not reported	2 (5.5)
Residential location (ASGC-RA classification)	
Inner Regional	16 (44.4)
Outer Regional	3 (8.3)
Remote	14 (38.9)
Very Remote	3 (8.3)
Time lived in regional or remote region	
Less than 2 years	2 (5.6)
2-5 years	3 (8.3)
6-15 years	5 (13.9)
15 years +	25 (69.4)
Not reported	1 (2.8)
Occupational Group	
Education	17 (47.2)
Allied Health	14 (38.9)
Social and Community Work	5 (13.9)

Table 2.

Changes in perceived knowledge and skills, and confidence across conditions

	Pre	Post	z	p	Pre	Post	z	p
Group + Individual (N=6)	3.23(.50)	4.31(.47)	-2.20	.028*	3.48(.51)	4.34(.36)	-2.20	.028*
Group alone (N=29)	3.33(.54)	4.00(.44)	-4.03	.000**	3.63(.47)	4.05(.42)	-4.03	.000**

Appendix 1

Survey Questions

Confidence

- I handle meeting new clients and families with relative comfort and ease
- I feel confident when helping children with autism and developmental delays, and their families
- I can answer most families' questions about their child's autism and other developmental delays
- I can help families bring about positive change in theirs and their child's life
- I can achieve the professional goals I set for myself
- I feel confident when helping children with autism and developmental delays
- I have contact with people of similar skills and experience who I would call successful

Knowledge and Skills

- I have a good understanding of autism.
- I can identify the early indicators of autism.
- I have good knowledge and skills on helping children and families manage their child's anxiety.
- I have good knowledge and skills in helping children with challenging behaviours
- I have good knowledge and skills in teaching and helping a child develop their social skills
- I have good knowledge and skills in developing and implementing strategies for emotional regulation for a child
- I have good knowledge and skills about sensory processing and promoting sensory regulation in children with autism
- I have good knowledge and skills in supporting children in the development of their play skills
- I have good knowledge and skills in supporting a child's development of self-help skills (dressing, feeding, bathing and grooming)
- I have good knowledge and skills in helping families where the children have feeding difficulties and fussy eating.
- I have good knowledge and skills in developing effective toilet training programs and supporting families to implement them for their child.
- I can identify early indicators of speech difficulties in a child.
- I have good knowledge and skills in supporting families to develop their child's speech development.
- I have good knowledge and skills in supporting children's development of social language. e.g. conversation and social interaction with others
- I have good knowledge and skills in developing and implementing effective visual supports to help with expressive and receptive communication.
- I have good knowledge and skills in supporting children's ability to attend, listen to instructions and complete tasks in a variety of environments.
- I have good knowledge and skills in using an iPad or similar device for educating and supporting development in children.
- I have good knowledge and skills in how to help families and children so they are ready for school.