

Implementation, Evaluation and Maintenance of a Social-Emotional Skills Training Program for Children with an Autism Spectrum Disorder in a Specialist School Setting

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Abstract: Socialization difficulties in children with an Autism Spectrum Disorder (ASD) are often associated with peer rejection and impaired academic achievement. Schools might appear to offer an ideal setting for social-emotional skills (SES) instruction. However, common challenges to successful implementation of school-based programs include inadequate staffing and resourcing, and a lack of ASD-specific staff training. This paper describes how barriers to program implementation were overcome in a project evaluating the Secret Agent Society (SAS) SES training intervention within Autism Spectrum Australia (Aspect) specialist classes. Questionnaire data was collected from school staff over a one-year period. Findings supported the effectiveness of the adoption process used, and suggest that SAS was feasible and acceptable to school staff.

Keywords: social skills training, Autism Spectrum Disorder, specialist school, program implementation

Social-communication impairments are a core diagnostic feature of Autism Spectrum Disorder (ASD – American Psychiatric Association, 2013; World Health Organisation, 2018) and have a profound impact on children's ability to benefit fully from regular educational provision. Social deficits in ASD affect many areas of functioning, including verbal and non-verbal communication; social reciprocity; difficulties in recognising, understanding or responding appropriately to others' behaviour, feelings or emotions; impaired social relationships, and difficulties in engaging in social interactions or interactive play with peers. In school settings, impairments in social communication in children with ASD are typically associated with low levels of peer acceptance, bullying, compromised academic achievement, attention and behavioural difficulties and secondary mental health problems (see for example, Deckers, Muris & Roelofs, 2017; Dovgan & Mazurek, 2018; Estes, Rivera, Bryan, Cali & Dawson, 2010; Hebron, Oldfield & Humphrey, 2017; Lieb & Bohnert, 2017; Miller et al., 2017). However, although the school environment can exacerbate many of the difficulties experienced by children with ASD, potentially it also offers an ideal setting for social-emotional skills training because it provides optimal opportunities for skills teaching, modelling, practice and generalisation.

Over the last two decades there has been a steady growth in the number of group-based interventions designed to improve social functioning and social understanding in children with ASD. Several meta-analyses and systematic reviews suggest that these interventions are moderately effective, although limitations include lack of generalization to other settings or to a wider range of social skills; concerns about fidelity of intervention delivery, and failure to maintain acquired skills post intervention (cf Bellini, Peters, Benner & Hopf, 2007; Flynn & Healy, 2012; Gates, Kang & Lerner, 2017; Kasari & Patterson, 2012; Whalon, Conroy, Martinez & Werch, 2015). Moreover, few of these programs have been conducted in school (cf Kasari & Smith, 2013; Locke et al., 2015; Ostmeyer & Scarpa, 2012). Those school-based studies that do exist (with the exception of two trials by Kasari and colleagues (Kasari et al., 2016; n=137; Kasari, Rotheram-Fuller, Locke & Gulsrud, 2012; n=60), mostly involve relatively small samples (e.g. Kretzman, Shih & Kasari, 2015; n=24; Locke et al., 2018b; n=31; Lopata et al., 2012; n=12; Radley et al., 2017; n=5) and/or do not incorporate a randomized research design. Indeed, it has been suggested that although very large numbers of pupils with ASD are exposed to some form of social-emotional skills training in schools, almost none of these programs are evidence based (Bellini et al., 2007; Hess, Morrier, Helfin & Ivey, 2008).

The challenges of conducting school-based social skills interventions for children with ASD have been described by a number of authors (e.g. Kasari & Smith, 2013; Lopata et al., 2012; Locke et al., 2015; Morgan et al., 2018; Ostmeyer & Scarpa, 2012). Barriers to successful implementation include insufficient resources within schools (in terms of time; staffing or finances); frequent cancellation of sessions due to competing school activities; the perception within some schools that social-emotional skills training is outside the 'core business' of academic instruction; staff shortages; lack of ASD-specific staff training and/or a lack of specialist staff to deliver evidence-based interventions; poor control over program fidelity; researchers omitting to engage staff fully in the planning and implementation of the program, and a failure to design programs that can be continued once the research trial terminates. To address these challenges, various adaptations have been recommended (Kasari & Smith, 2013; Locke et al., 2015; Ostmeyer & Scarpa, 2012). These include a flexible approach to treatment implementation and data collection (while still maintaining fidelity to the core components of

treatment); the provision of high-quality training and booster sessions for program implementation staff; the involvement of school leadership personnel (e.g. the principal) in all aspects of program implementation and the involvement of non-teaching staff, such as parents to assist in the implementation of the programs and enhance generalization. Finally, as highlighted by Fixsen et al. (2010), few research projects culminate in full program implementation by an organization. Typically, once a research project is complete, program delivery is either discontinued, or only continues for those staff who were original research participants. Planned collection of follow-up data and monitoring of continuation of therapy post-trial are needed to assess not only the maintenance of treatment effects, but also the longer-term acceptability and adoption of the intervention by the institutions involved.

The current paper describes how several of these recommendations were implemented in a community-partnership evaluation of a social-emotional skills training program (The Secret Agent Society -SAS) within Autism Spectrum Australia (Aspect) specialist classes throughout New South Wales (NSW), Australia. The SAS Program (Beaumont, 2010) is a multimedia social skills intervention that aims to teach children with ASD to recognise, understand and express emotions in appropriate ways; to socialise and play with their peers, and to cope with everyday social challenges, such as asking for help and coping with teasing or bullying. Training methods include discussion, role play and practice using a wide range of different games and materials. Children are also encouraged to complete weekly 'home missions' that involve playing a specially designed computer game and practising learnt skills in everyday contexts. SAS is designed for elementary school children (age 8-12 years) whose cognitive abilities are in the low average range or above. Delivery is in group settings by trained facilitators and the program also requires the active participation of school staff and parents.

Initial trials of the SAS Program (formerly called the Junior Detective Training Program) were conducted in a university setting (Beaumont & Sofronoff, 2008) and later with parents as the main therapists (Sofronoff, Silva & Beaumont, 2015). The intervention was found to result in significant gains in parent and teacher ratings of children's social skills and emotional understanding, and on child-completed analogue tasks involving anxiety and anger management strategies in school. Treatment gains were maintained up to five months post-intervention. SAS was subsequently implemented in the school environment (Einfeld et al., 2018; see Method section for details). Treatment fidelity (percentage of program activities completed by facilitators) was good and initial results demonstrated that children receiving the intervention made significant gains on parent-rated measures of social skills, emotion regulation and social problem solving. These gains were maintained at 12-month follow-up. Teachers ratings did not show a significant improvement post-intervention, but were significant at 12-month follow-up (see Einfeld et al., 2018 for details).

The specific aims of the present paper were to assess:

- (1) The views of school staff concerning the adequacy of training
- (2) Facilitator ratings of competence and confidence in delivering the program
- (3) Facilitator ratings of satisfaction with the program
- (4) Maintenance and generalization of the program following the cessation of the trial

Method

Participants

Child participants. Students from 15 Aspect ASD-specialist satellite classes attached to mainstream primary and secondary schools throughout NSW were recruited for this study. Satellite classes typically consisted of a teacher and teacher-aide supporting a class of six to 12 students with ASD. All child participants were required to have a clinically confirmed diagnosis of an Autism Spectrum Disorder according to DSM-IV criteria (i.e., Autistic Disorder, Asperger's Disorder or Pervasive Developmental Disorder – Not Otherwise Specified) from a specialist medical practitioner or clinical psychologist within the past 12 months.

Sixty-eight children (61 male) and their families completed the SAS Program. Children's mean age was 10.5 years (SD = 1.5, range = 8.2 to 14.0 years); mean receptive language age equivalent was 9.3 years (SD = 2.5, range = 4.8 to 20.3 years); mean Full Scale IQ was 90.0 (SD = 19.4, range = 48 to 136); mean Verbal IQ was 90.2 (SD = 17.6, range = 55 to 133) and mean Performance IQ was 95.0 (SD = 19.9, range = 57 to 144). The average socioeconomic status rating for participants, determined from Australian Bureau of Statistics socio-economic decile ratings for postcodes, was 6.5, similar to the average of 6.0 for NSW and Australia as a whole.

School staff. A total of 31 school staff (30 females) was trained to deliver the SAS intervention over a 13-week period. Twenty-seven (87%) had a background in education, two (6%) in psychology and two in speech pathology; 24 (77%) had a university Bachelor-level qualification and, six (19%) a Masters qualification; one provided no information on qualifications. Staff reported having worked with children with ASD for an average of 8.9 years (SD = 7.2, range = 0.25 to 25 years). Nineteen of the staff who were trained went on to directly deliver the intervention (program facilitators). The remainder included school principals, teacher-coordinators and classroom teachers who played a pivotal role in supporting program delivery.

Program Description and Staff Training

SAS features a multi-level computer game and other spy-themed games and activities to teach children how to recognise emotions in themselves and others, express their feelings in appropriate ways, talk and play with others, cope with mistakes and avoid and manage bullying and teasing. The intervention comprised nine weekly 90-minute child sessions delivered to groups of three to six students by one or two trained facilitators. These were interspersed with four two-hour parent group information sessions in weeks 1, 5, 8 and 13 of the program. Three- and six-month student group booster sessions and individual follow-up parent phone calls were conducted to support students and parents to continue using skills from the program after formal weekly sessions ended.

Skill generalisation was facilitated in a number of different ways. These included: pocket-sized 'Code Cards' and classroom posters featuring skill steps that children referred to when needed; weekly teacher tip sheets that provided satellite class staff with recommendations on how to support students in applying their social-emotional skills in the classroom and playground; a home-school monitoring and reward system, and between-session 'missions' that involved children practising targeted social-emotional skills and documenting their progress in a Secret Agent Journal (see www.sst-institute.net for additional information). Further details

regarding the program content and delivery, together with the improvements made by study participants on quantitative child, parent and teacher program outcome measures are described elsewhere (see Einfeld et al., 2018).

School staff attended a two-day practitioner training course to upskill them in delivery of the SAS intervention. This training course involved a mix of didactic presentations, small and large group discussion activities, video clips demonstrating program delivery with children and staff role plays of core competencies (e.g. teaching a social skill, facilitating the Secret Agent Society role-play board game with students).

Measures

Staff Ratings of Competence and Confidence and Satisfaction with Training

Consultation Skills Checklist. School staff completed the Consultation Skills Checklist (CSC) at the beginning and end of the SAS Practitioner Training Course. The 28 item CSC is an adaptation of a measure used to evaluate Triple P-Positive Parenting Program^R practitioner training courses (see Sanders, Tully, Turner, Maher & McAuliffe, 2003, for details) and was shown to have excellent internal consistency in the current study (Cronbach $\alpha = .96$). Each item is rated on a 1-7 Likert scale, with higher scores reflecting higher levels of confidence, competence or adequacy of training. The first six questions ask practitioners to rate the overall adequacy of training and their confidence in the domains of group social skills instruction for children with ASD and in providing guidance to parents and teachers on how to support the social-emotional development of these children. The final 22 questions involve practitioners rating their level of competence in more specific skill areas that are taught within the SAS curriculum and Practitioner Training Course. These include: assessing the social-emotional functioning of children with ASD; dealing with parent and teacher resistance; teaching children with ASD how to recognise emotions in themselves and others; the use of relaxation strategies; how to apply steps for talking and playing with others, how to reduce the risk of and/or manage bullying and teasing and how to provide consultative support to other school staff and parents. An average per item score is computed across the 22 skill sub-domains to provide an index of competence in teaching program-specific social-emotional skills.

Workshop Evaluation Survey (Sanders et al., 2003). This survey was completed by school-staff at the end of the two-day SAS Practitioner Training Course. It involved them rating whether they felt they had the skills and knowledge to implement the SAS Program and their overall satisfaction with the SAS Practitioner Training Course. Item ratings could range from 1 to 7, with higher scores indicating more positive evaluations. Two items from the questionnaire were of particular interest – “Do you feel you now have the skills to implement the Secret Agent Society Program in your work with families?” and “In an overall sense, how satisfied were you with the training course?”

Teacher Confidence Ratings. At the beginning and end of the SAS Program and at 12-month follow-up, all classroom teachers were asked to rate how confident they were in their ability (i) to manage the behaviour and (ii) to support the future social and emotional development of each student who participated in the research project. Ratings were based on two

0 to 5 Likert scales, with higher ratings reflecting greater confidence. Of the 31 teachers who completed these ratings, 19 were trained program facilitators.

Facilitator Ratings

Satisfaction Questionnaire. After delivering the intervention to students and parents, program facilitators completed a qualitative feedback questionnaire, where they were asked to provide feedback on the strengths and weaknesses of the SAS Program and make recommendations for improvement. Program facilitators were also asked to rate how helpful they found weekly phone supervision sessions and how supported they felt by Aspect in delivering the program (e.g. provision of release time to prepare for sessions, teacher coordinator support) on two 0 to 5 Likert scales, with higher ratings reflecting greater levels of helpfulness and support respectively.

Thematic analysis of facilitators' responses followed the six steps identified by Braun and Clarke (2006). Written responses to the questionnaire items were thematically coded by hand by a rater according to the overarching research questions. Initial codes were generated for the whole data set and then grouped together in themes. Initial codes were brought together and recoded to draw out thematic sub-codes. Single instances of codes were removed and those with close similarity to other codes were merged. All facilitator survey responses were independently coded by a second rater using the same thematic analysis protocol. One hundred percent inter-rater agreement obtained.

Statistical Analysis

A series of repeated measures t-tests was conducted to evaluate change from pre- to post-training. Staff rated their perceived adequacy of training, confidence and competence to conduct child, parent and teacher ASD social skills instruction and consultation using the Consultation Skills Checklist. Due to the multiple statistical analyses performed, the alpha level for analyses was adjusted to .001. Case-wise deletion was used to manage missing data and staff numbers for each analysis are indicated in the relevant text or tables.

Results

Adequacy of Training

As shown in Table 1, there was a significant improvement from pre- to post-training in staff perceptions of adequacy of training, confidence and competence to conduct ASD social-emotional skills consultations with children, parents and teachers ($ps < .001$), with large effect sizes for all seven statistical analyses performed ($ds = 1.00-1.41$).

Table 1. Aspect staff Responses to Consultation Skills Checklist Items at Pre- and Post-Training

Outcome	N	Pre training			Post training			<i>t</i>	<i>p</i>	<i>d</i>
		Mean	SD	Range	Mean	SD	Range			
Do you feel adequately trained to conduct consultations around the social and emotional skill development of children with Autism Spectrum Conditions?										
Child Consultation*	31	4.45	1.23	2-7	5.70	0.66	4-7	6.48	<.001	1.16
Parent Consultation*	31	4.12	1.28	2-7	5.48	0.76	4-7	6.29	<.001	1.13
Teacher Support*	31	4.16	1.31	2-7	5.58	0.71	4-7	6.15	<.001	1.10
How confident are you in conducting these consultations?										
Child Consultation*	31	4.55	1.15	1-7	5.58	0.92	4-7	6.15	<.001	1.10
Parent Consultation*	31	3.87	1.31	1-7	5.10	0.97	4-7	5.67	<.001	1.02
Teacher Support*	30	4.33	1.15	1-6	5.5	0.90	4-7	5.43	<.001	0.99
How competent do you feel in your consultation skills? (<i>average of responses to 22 questions about specific skill domains</i>)										
Child, Parent and Teacher Consultation*	30	4.31	0.81	2.82 - 6.18	5.68	0.71	4.18 - 6.86	9.54	<.001	1.74

*Likert scale responses range from 1 to 7, with higher scores indicating greater levels of reported adequacy of training, confidence or competence.

Results from the Workshop Evaluation Survey (completed by 31/32 staff) suggested that at the completion of the two-day practitioner training course, practitioners were reasonably confident that they had the skills necessary to deliver the SAS Program ($M = 5.77/7$, $SD = 0.67$, range = 5-7) and were very satisfied with the training course ($M = 6.41/7$, $SD = 0.67$, range = 5-7).

Program Facilitator Satisfaction Questionnaire Results

Fourteen of the 19 (74%) Aspect staff who delivered the SAS Program completed the satisfaction questionnaire. Table 2 summarises the strengths, challenges and areas for improvement reflected in program facilitators' responses to the questionnaire items. Key program strengths highlighted by facilitators included the relevance of SAS content to the student population, the engaging resources included in the curriculum, and the program's

comprehensive and structured teaching approach. Key challenges highlighted included tailoring the content to the needs of students with intellectual disabilities or delays in receptive or expressive language skills and lack of caregiver support for skill learning and generalisation in the case of some students.

Table 2. Strengths, Challenges and Areas for Improvement identified by staff in the Program Facilitator Satisfaction

Area of Feedback	Theme	Number of Facilitators who Commented on Theme (Total N=14)	Example Quotation Illustrating Theme
Program Strengths	Appropriateness of the program for matching the specific needs of students	9	“The content of the program is very relevant and necessary for our students to learn. The resources were very motivating and provoked interest. Incorporated a variety of teaching strategies. SAS is very structured and explicit.”
	Effective structure of the program	6	“Structured systematic approach to teaching a wide range of social skills. Fun, motivating and engaging. So comprehensive! Everything has been thought of.”
	Usefulness of the program tools	5	“The completeness of the program – workbooks, scripts, manuals, computer program, board game – all add to a well thought out program. Addresses social and emotional development. Quality of materials....”
Program Challenges/ Recommendations for Improvement	Matching the content to the cognitive needs of all students	11	“It was a lot of content to cover with students requiring considerable support with their receptive/expressive language skills and lower IQ.”
	Family environment (e.g. new baby at home, difficult family circumstances).	11	“Many different carers (at) home, e.g. different sets of grandparents, due to parents working long hours.”
	Lack of time for facilitators to	7	“A set session (time slot, aide support, uninterrupted) to prepare

Area of Feedback	Theme	Number of Facilitators who Commented on Theme (Total N=14)	Example Quotation Illustrating Theme
	prepare for and run the program in addition to their existing workload.		for session i.e. photocopying, laminating, writing on diary forms, organising resources/telephone calls etc. We were allocated an extra aide to give us time to do this but due to behaviour difficulties in class we didn't get this time."
	Problems with students not completing between session skills practice tasks due to limited parental support.	6	"Parent support in following through with content, and assisting with home missions. I felt that, due to my workload being on class, I couldn't put as much time and effort into assisting more with follow-through on this."
	More time needed to deliver program content.	5	"I understand the need to cover content in 9 weeks but I found some sessions needed weeks to adequately cover content and allow for skill acquisition...Deliver in the school setting over 6 months or at a pace determined by the students' needs/understanding."

Facilitators' responses to the question, "Rate how helpful you found the weekly phone supervision sessions." (0-5 Likert scale rating, with higher ratings indicating greater levels of helpfulness), indicated that they found the phone supervision sessions with the program developer helpful ($M = 3.62/5$, $SD = 1.19$). However, their response to the question, "Rate how supported you felt by Aspect in delivering the program (e.g. provision of release time to prepare for sessions, teacher coordination support, etc. "– 0-5 Likert scale rating) suggested that they may have benefited from more release time for program preparation and delivery ($M = 2.17/5$, $SD=1.03$), consistent with their qualitative feedback on this issue shown in Table 2.

Teachers' Confidence Ratings

Mean scores and standard deviations for each assessment occasion (pre-, post intervention and 12-month follow-up) increased over time (see Table 3). Random effects regression indicated significant improvements in classroom teachers' self-rated confidence in their ability to support students' social-emotional development and manage their behaviour (see Table 3).

Table 3. Teacher Confidence Ratings at each Assessment Occasion and Random Effects Regression Results

	N	Supporting students' social and emotional development		Managing students' behaviour	
		Mean	SD	Mean	SD
Pre-intervention	65	3.5	0.8	4.0	0.9
Post-intervention	55	3.9	0.9	4.1	0.7
12-month follow-up	44	4.1	0.8	4.3	0.7
	N	Coefficient		Coefficient	
Years since pre-intervention	154/65 ^Δ	0.34**		0.16*	
Intercept	154/65 ^Δ	3.61**		3.99**	

Likert scale responses are on 0 to 5 scales, with higher scores indicating greater confidence.

^Δ Observations/participants *p<.05 **p<.001

Maintenance of the Program Post Trial

The SAS program continues to be successfully delivered across most Aspect Schools through satellite classes. Teacher feedback suggests that the high quality, engaging program materials that SAS provides help to optimise students' social-emotional learning outcomes, in addition to building teachers' skills and confidence in social-emotional skill instruction and support. Parents across schools describe SAS as having a positive impact on their children, and ongoing data collection shows students who participate in the program continue to improve in their emotion regulation and social skills. Persistent challenges for schools included covering the cost of program materials and offsetting staff turnover by training new Aspect school staff to deliver the intervention.

Discussion

A number of recent intervention studies for children with ASD has highlighted the difficulties of conducting treatment research in school settings. In the present study, we attempted to overcome some of these barriers and to demonstrate that it is possible to fully engage school staff in program delivery. Overall, the results from this project support the effectiveness of the implementation process used and suggest that SAS was feasible and acceptable to the Aspect school staff who delivered and supported the program. Program facilitators' confidence and competence ratings in conducting social-emotional skills training with students with ASD, and in providing related consultative support to other school staff and parents improved from pre- to post-intervention. These improvements in self-ratings of competence were achieved despite the program facilitators already having tertiary level qualifications in education or allied health and several years' experience working with students with ASD prior to attending the SAS Practitioner Training Course.

There was also an improvement in classroom teachers' confidence in supporting students' social-emotional development and managing their behaviour over the course of the study. However, it is unclear whether these changes were related to teachers' increased experience of working with students with ASD over the 15-18 months of the study, or to specific elements of the program (e.g. initial facilitator training, program delivery manual, Teacher Tip Sheets). Program staff also highlighted important challenges associated with program delivery in a specialist class context, including tailoring program content to students' learning needs, engaging caregivers to support students' social-emotional skill learning, and the need for additional program planning and delivery time.

Despite these challenges, this project demonstrated that the exclusive use of school staff (as opposed to research team members) as program delivery agents resulted in a successful outcome, and appeared to result in gains in students' social-emotional functioning similar to those achieved in programs involving parents or clinical/university trained staff. The study implemented several of Locke et al.'s (2014) program implementation recommendations, including the provision of high-quality training and follow-up supervisory support to program delivery staff, actively involving the school leadership team in program planning and implementation from the outset of the project and applying for grant funding to cover program resource costs. In contrast to almost every study of this kind, we were able to demonstrate that, once the trial was completed, the program continued to be successfully implemented and expanded across Aspect satellite classes over the course of the following years. Since the study ended, Aspect has integrated SAS into its Comprehensive Approach for Education, has extended the reach of the program through its network of satellite classes and holds a licence to train other professionals in the community in SAS program delivery.

Changes to Practice

In response to the recommendations for improvement made by Aspect staff, changes have been made to how schools adopt the SAS Program. For example, several school staff indicated that they had insufficient release time to adequately prepare for program delivery. This has been addressed by collaborative review and completion of the SAS Training Guide and Program Readiness Questionnaire by key decision makers and staff who are to deliver SAS at each school prior to program training or delivery. Previously, only school district decision-makers were required to complete and return these documents, with individual school leaders and front-line staff often only becoming fully aware of program delivery time and resource requirements post-training during the initial implementation phase. This change enables challenges to program delivery at an individual school level (e.g. lack of funding to buy program materials) to be identified and addressed from the outset.

In response to feedback from Aspect staff, several adaptations have also been made to the SAS Program itself. These include guidelines to tailor the program to the needs of children with intellectual disabilities or language and learning difficulties, and the development of a program variant involving shorter sessions (weekly 45-minute rather than 90-minute lessons over two school terms), allowing more time for skill learning and consolidation by students and families.

Several factors need to be considered when drawing conclusions from this study. Firstly, the study was conducted in a highly specialised setting (small ASD specialist classes with staff who were highly trained and experienced in working with students on the Autism Spectrum). It is therefore important for future research to evaluate the generalisability of these results to other school settings with less specialised staff. Furthermore, data on program fit and incentives and barriers to program implementation were collected from classroom teachers and program facilitators. It would have been valuable to gather data on these factors from teacher coordinators, school principals and the National Director of Aspect Education, as they may have identified different dimensions of significance, such as cost.

Nonetheless, the current study provides preliminary data demonstrating how an evidence-based social-emotional skills training program for children with ASD can be successfully implemented in a sustainable manner in a school setting. Future research will evaluate how this implementation model can be extended to mainstream schools and across larger school districts, involving a cost-benefit analysis of student outcomes. This process will help school leaders to make evidence-informed decisions about whether the social-emotional and academic gains for students with ASD that may result from participation in appropriately tailored, evidence-based social skills interventions outweigh the challenges and barriers within a school setting.

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Conflict of Interest: Dr Renae Beaumont is the author of the Secret Agent Society Program and receives royalties on all program materials and practitioner training courses sold.

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