

A Theoretical Framework on Using Social Stories with the Creative Arts for Individuals on the Autistic Spectrum

R. Bawazir, P. Jones

Abstract—Social Stories are widely used to teach social and communication skills or concepts to individuals on the autistic spectrum. This paper presents a theoretical framework for using Social Stories in conjunction with the creative arts. The paper argues that Bandura's social learning theory can be used to explain the mechanisms behind Social Stories and the way they influence changes in response, while Gardner's multiple intelligences theory can be used simultaneously to demonstrate the role of the creative arts in learning. By using Social Stories with the creative arts for individuals on the autistic spectrum, the aim is to meet individual needs and help individuals with autism to develop in different areas of learning and communication.

Keywords—Individuals on the autistic spectrum, social stories, creative arts, theoretical framework.

I. INTRODUCTION

INDIVIDUALS on the autistic spectrum are often characterized with difficulties in communication and social interaction. They also require specific strategies to help them develop in different areas of learning.

Social Stories are widely used strategy with individuals on the autistic spectrum to address areas of learning and development [31]. They are short stories designed according to specific guidelines, which can be used to engage with different areas such as skills, events or social situations. The way Social Stories are structured can provide many advantages for individuals on the autistic spectrum.

Another strategy is using the creative arts such as visual art, drama, music, and dance. These ways of working can be used alongside different learning activities for individuals on the autistic spectrum. The creative arts are seen as dynamic components that can be used to enhance learners' abilities when it comes to understanding, acting, and feeling.

The use of Social Stories in conjunction with the creative arts can be an alternative way to assist individuals on the autistic spectrum with specific aspects of their learning and development. This refers to the use of Stories with a creative arts element in their delivery to stimulate cognition, social interaction, communication, and psychological wellbeing for individuals on the autistic spectrum, for instance.

The paper begins by discussing existing theories that offer a

rationale for working with Social Stories, including cognitive and behaviourist theories. Following this, the paper argues that Bandura's social learning theory can offer an effective way to understand the potential of using Social Stories in the context of individuals on the autistic spectrum. It also argues that Gardner's multiple intelligences theory demonstrates the importance of using the creative arts as a way to promote learners' abilities. Finally, the paper propose a theoretical framework for combining the use of Social Stories with the creative arts for individuals on the autistic spectrum, in the hope of providing a means of empowering their educational success.

II. THEORETICAL FRAMEWORK

A theoretical framework can be considered as "a theory that works with the philosophical lens in a complementary theory way" [46]. Designing such theoretical frameworks can help researchers focus on relevant theories and obtain a balanced perspective on different debates relevant to their studies. The literature argues that the role of theory within qualitative research fulfils different purposes. Its first role is to orientate and situate research within fields of knowledge that are relevant to it. Theory can also deepen the understanding of the research's aims and help locate it within relevant theoretical debates. Researchers can also "test theories, use theories to guide data analysis or generate theory" [46]. In other words, using theory can be useful in explaining relationships between phenomena and can lead researchers to develop new insights into existing theories. In terms of the current research, the use of theory will provide a better understanding of the way Social Stories and the creative arts bring positive changes for individuals on the autistic spectrum. A theoretical framework can also help to locate current issues and questions within existing theories, and creates a dialogue between them. Referring to existing theories or theoretical frameworks can help explain and interpret the findings of any new research.

There are many debates and discussions concerning theories and their relation to Social Stories. For instance, Gray's initial work on Social Stories demonstrates the rationale behind the design of a Social Story. Gray states that Social Story

"is based on the growing understanding of social cognition in autism, and a belief that this understanding should be reflected in how social behaviour is taught to students with this disorder" [9].

Gray's early work offered a rationale with no real theoretical engagement, indicating that the underlying

Rasha Bawazir is a doctoral student at University College London Institute of Education, London, UK (e-mail: rasha.bawazir.13@ucl.ac.uk).

Professor. Phil Jones is with the Learning and Leadership Department, University College London Institute of Education, London, UK (e-mail: phil.jones@ucl.ac.uk).

rationale for Social Stories is their inherent ability to explain how they can be useful in teaching individuals with autism about social situations. This point of view is exemplified by the way Gray explains the purpose of using Social Stories; "Social Stories seek to minimize potentially confusing instructional interactions, to provide students with autism direct access to social information" [9]. Although this demonstrates the reason behind the use of Social Stories with individuals on the autistic spectrum, it does not explain from a theoretical perspective the mechanisms that underlie the changing situations in which they are used. However, Gray later links her rationale for using Social Stories by drawing on theories underlining the cognitive 'deficits' of individuals on the autistic spectrum [9]. One of these theories is the theory of mind, which covers individuals with autism and their "difficulty reading emotions, intentions and thoughts" [59]. The other theory used by Gray is central coherence, "pulling information together from higher-level meaning" [18]. Gray argues that the 'deficit' experienced by individuals on the autistic spectrum relates to the theory of mind and central coherence, which affect their ability to understand and read social cues. Based on this understanding, Gray draws on other authors Peeters [59] and Happé [18] to develop a link with the notions of theory of mind and central coherence connecting them to Social Stories. She argues that Social Stories explain and clarify the signs of unclear social situations, rendering them comprehensible and readable for individuals with autism [10]. However, cognitive theories such as the theory of mind and central coherence "do not adequately explain the functional relations between Social Stories and target behaviour" [61]. This means that cognitive theories do not specifically consider the ways in which Social Stories develop change for individuals on the autistic spectrum. Reynhout and Carter argue

"while it is possible that perspective sentences embedded within Social Stories may assist in addressing theory of mind problems in individuals with ASD, there is currently limited evidence relevant to this issue" [20].

The usefulness of Social Stories in dealing with weak central coherence is also still an unproven assumption [20]. This shows questions and limitations still remain surrounding the validity of using cognitive theories as a rationale for Social Stories when working with individuals on the autistic spectrum. Such limitations indicate a continuing need to develop an effective theory to help explain whether or how Social Stories work for individuals on the autistic spectrum and how they can stimulate changes in their responses.

An alternative theory that has been associated with Social Stories is behaviourist theory. This, according to Skinner, is based on the idea of operant conditioning and the use of different types of reinforcement to help shape behaviour [7]. He states that "the conditions under which a person acquires behaviour are relatively accessible and can often be manipulated" [7]. Rota draws on behavioural theory to argue that Social Stories work by manipulating children's antecedent behaviour to help them adopt to change, stating that "the Social Story becomes the stimulus and the response is the

desired behaviour" [45]. From the perspective of behaviourist theory, the Social Story is seen as a stimulus promoting change in individual behaviour. In this respect, the use of Social Stories can be theorised as a way of engaging individuals on the autistic spectrum to promote a desired behaviour via learning experience.

Although behaviourist theory is linked with theorising Social Stories, it appears less effective in relation to my research and its aim. Bandura argues that

"Skinner's analysis clarifies how similar behaviour that a person has previously learned can be prompted by the actions of others and the prospect or reward. However, it does not explain how a new matching response is acquired observationally in the first place" [2].

Behaviourist theory does not explain the role of observation in behaviour change and the literature on theorising Social Stories from a behaviourist perspective does not in itself justify the relationship between cognition and behaviour in promoting change. This way of theorising change in situations where Social Stories are used with individuals on the autistic spectrum is still unexplained, and this paper will focus on the resulting gap.

The following section discusses a possible theoretical framework that could be used to underpin my research. This paper suggests a combination of social learning and multiple intelligences theories, which will be used to help offer more insight into the theoretical underpinnings of Social Stories and the creative arts. The selection of two theories to develop a single theoretical framework will help to explain the way Social Stories and the creative arts theories change in the responses of individuals on the autistic spectrum. This understanding will be justified by linking existing examples from the literature on Social Stories and the creative arts for individuals on the autistic spectrum to form a theoretical perspective. While social learning theory may explain the mechanism behind Social Stories and the way they influence change in responses, multiple intelligence theory can be used to demonstrate the role of the creative arts in learning. By bringing the two theories together, a new theoretical framework will be created to help understand and theorise change in the responses of individuals on the autistic spectrum.

A. Social Learning Theory

Social learning theory explains the role of observational learning in the modelling and development of different social behaviours. Bandura states that

"observational learning entails symbolic coding and [the] central organization of modelling stimuli, their representation in memory, in verbal and imaginal codes, and their subsequent transformation from symbolic forms to motor equivalents" [3].

This helps demonstrate that cognitive and behavioural mechanisms of modelling behaviour occurs as a result of observation. To understand the procedure of learning through observation, Bandura argues that

“by observing a model of the desired behaviour, an individual forms an idea of how response components must be combined and temporally sequenced to produce new behavioural configurations” [2].

This can be seen in the way observers react after analysing a model and how this can lead to adopting new behavioural strategies. There have been studies examining the effects of observational learning using stories and the findings of Alvord and O'Leary [38], as well as Klingman [6], concurs with Bandura's theory. Although the literature theorises Social Stories from a behaviourist perspective, this paper argues that social learning theory can be useful for creating a framework explaining changes that occur when Social Stories are used.

There are different ways of learning through observation. Observational learning can be acquired “through exposure to behavioural modelling cues in actual or pictorial forms” [3]. This indicates that modelling behaviour can be analysed in different ways, either in a real or symbolic terms. Symbolic modelling can be produced in different ways in words [2] and pictorial formats [38]. This demonstrates the variety of theoretical approaches used in producing symbolic modelling. The way Social Stories are created can be seen as a form of symbolic modelling, which can be linked to Brownell's description of Social Stories as something that “may be presented as solely printed words [or in] words and pictures” [39]. Social Stories can provide the modelling stimuli that help individuals on the autistic spectrum to acquire or learn specific behaviours and concepts. Bandura states that “the modelling stimuli convey information to observers about the characteristics of appropriate responses” [3]. The way observational learning is developed can help to indicate what happens when individuals with autism read Social Stories. As Bandura explains, “observers must abstract common attributes exemplified in diverse modelled responses and formulate a principle for generating similar patterns of behaviour” [3]. Hence, when reading Social Stories which represent symbolic modelling, individuals with autism need to retain a memory of what they have read according to which they can perform a desired change after they finish reading the Story. The idea of observational learning through symbolic modelling can be understood as having a strong connection to Social Stories.

Observational learning involves four sub-processes: maintaining attention to the modelled behaviour, retaining the modelled information, motoric reproduction, and motivation [2]. Bandura's explanation of the modelling process indicates that a

“lack of matching behaviour following exposure to modelling influences may result from either failure to observe the relevant activities, inadequate coding of modelled events for memory representation, retention decrement, motoric deficiencies, or inadequate conditions of reinforcement” [2].

Based on this, the paper argues that Bandura's theory can be used as an explanation as to why some individuals on the autistic spectrum do not imitate the behaviour or learn from the concept presented in Social Stories.

Subsequently, this paper proposes that observational

learning processes can help us understand how changes in the responses of individuals on the autistic spectrum can occur when using Social Stories. The importance of maintaining an individual's attention during the learning process can be justified by Bandura's theory. He argues that “a person cannot learn much by observation if he does not attend to, or recognize the essential features of the model's behaviour” [2]. This shows that shifts in attention can be a key factor, negatively affecting the ability of individuals with autism learning through observation. If individuals with autism cannot keep their attention focused on the Social Stories, it may affect their learning outcomes. This is shown in a study in which a child with autism did not benefit from a Social Story because his attention was distracted by his peers [13]. It is suggested that selecting a suitable place to read Social Stories can help children with autism to focus on the task [62]. This suggestion was based on study findings [62] concerning children with autism who showed unsuccessful results because they had been distracted when reading Social Stories. This provides the theoretical rationale for an association between location and attention, and also shows that it is vital to maintain the attention of individuals with autism when they read Social Stories. These studies, [13] and [62], offer a way of understanding contextual factors that might be relevant in theorising change for individuals on the autistic spectrum. Consequently, theorising the roles of space and attention span can be useful in understanding why Social Stories are useful in some, but not in all, circumstances and conditions.

Information retention is another significant element in the process of observational learning. Bandura believes that “a person cannot be much influenced by observation of a model's behaviour if he has no memory of it” [2]. The ability to remember what individuals with autism have observed is necessary in order to accrue learning thorough observation. Penton mentions “the participant's ability to comprehend and remember the Social Story may be more important than regular reading of the Social Story within the first two weeks” [62]. It is also proposed that there could be a link between the level of understanding of Social Stories in children with autism and their adherence to desired behaviour [21]. It was found that a child with autism who was able to answer Social Story comprehension questions correctly showed significant improvements in desired behaviour [21]. However, a child who provided incorrect answers about a Social Story was not able to replicate the behaviour shown in the Story [21]. Reynhout and Carter argue that the importance of the relationship between comprehension and action lies in the link between understanding and retaining observed information [21], [22]. Based on such conclusions it might be useful to assess the level of comprehension of Social Stories in individuals on the autistic spectrum. Reynhout and Carter point out that comprehension questions used to be included in Gray's early guidelines for Social Stories, but were removed from subsequent editions [21]. The question here is whether comprehension questions should be reinstated as an integral part of the Social Story procedure.

The third process of observational learning is motoric

reproduction. This involves “the utilization of symbolic representation of modelled patterns to guide overt performances” [4]. The time needed to acquire this process differs from one individual to another. Bandura indicates that “the amount of observational learning that a person can exhibit behaviourally depends on whether or not he has acquired the component skills” [2]. Literature on Social Stories shows variations in the time individuals with autism spend reading Social Stories. In different studies, Social Stories were read for three days over four weeks [52], 10 times for two days [36], and daily for over five weeks [62]. It was suggested that examining the role of frequency, repetition, and time “may be useful because some social skills may require more instructional time to bring a student with HFA/AS to a level of adequate proficiency or greater opportunities to practice the targeted skill” [17]. This raises the question of the importance re-examining the role of time as a factor within motoric reproduction when Social Stories are used with individuals on the autistic spectrum.

Motivation is another important factor to consider when theorising the nature and effects of Social Stories. Bandura considers that “models who possess interesting and winsome qualities are sought out, where those who lack pleasing characteristics tend to be ignored or rejected” [2]. One of the challenges that individuals on the autistic spectrum experience is a lack of motivation in terms of communicating with others [5] and to learn [44]. Lack of motivation in individual with autism is usually shown “by avoidance, inattention, noncompliance, and repeated temper tantrums” [44]. In order to motivate individuals with autism to learn, different strategies have been recommended such as including the “child’s choice of stimulus” [35]. By getting to know the interests and preferences of individuals on the autistic spectrum, we can help create a motivational environment for them to reach their full learning potential. This implies that Social Stories which present favourable characters will encourage individuals with autism to engage more fully with reading the Story. According to Özdemir, “the adaptations of pictures of interest for each participant were a crucial factor in motivation” [54]. Authors such as Koegel and Koegel [35], as well as Özdemir [54], point out ways in which motivation connects to the creation of individualised Social Stories that contain interesting elements for individuals on the autistic spectrum. This is proposed as a method of promoting individuals with autism to read Social Stories and to perform or develop a desired change. On the other hand, Social Stories that contain less interesting elements may prevent the success of the lessons they contain being adopted by individuals with autism. The way Social Stories are created can hinder the user’s motivation, for example by the use of abstract information [55]. Bandura’s theory on the role of motivation may be important when planning and understanding the effect of Social Stories for individuals on the autistic spectrum.

After examining each method of observational learning and the ways in which it could be linked to Social Stories, it is important to consider each step carefully in order to reduce the possibility of unsuccessful results when Social Stories are

used for individuals on the autistic spectrum. As the paper proposed earlier, observational learning processes can help theorise the ways in which Social Stories illustrate change for such individuals. However, there are some limitations related to social learning theory. Fryling, Johnston, and Hayes argue that “Bandura’s theoretical constructs are not derived from events, and as such cannot be found and thereby can never actually be studied” [42]. This means that the scenarios used in Bandura’s experiments are idealised, making them difficult to apply them in real life situations. Another limitation is linked to the way aggressive behaviour is understood. Although aggressive behaviour can be learned by observation, genetic factors can also be a related cause of antisocial or aggressive behaviour [8]. This demonstrates that there might be other underlying causes for the development of some types of behaviour and associating Bandura’s theory to all phenomena therefore becomes problematic. In criminality studies, for instance, the usefulness of social learning theory to justify crime has been questioned as it is incapable of providing a clear explanation for some types of criminality [14]. This seems to indicate that an individual’s behaviour can be more complicated and may be influenced by other factors. Some of these limitations can be related to the current research. When considering genetic factors in conjunction with these limitations, for example, such factors may also be linked to some of the behaviour displayed by individuals on the autistic spectrum that could not be improved by the use of Social Stories. So we can conclude that while Bandura’s theory is useful in providing an explanation about learned behaviour, there is some behaviour that cannot be fully justified from a theoretical viewpoint.

In this section, the paper argues that social learning theory could be used to theorise changes in the responses of individuals on the autistic spectrum when using Social Stories. This argument was justified by associating the observational learning process with examples from Social Stories literature for individuals on the autistic spectrum.

B. Multiple Intelligences Theory

Multiple intelligences theory is based on the idea that different types of intelligence can be used to process information [23]. Multiple intelligences, according to Gardner, are categorised as follows: verbal-linguistic, musical, logical-mathematical, visual-spatial, bodily-kinaesthetic, interpersonal and intrapersonal.

“Gardner’s cognitive model proposes that human beings are multidimensional subjects that need to develop not only their more cognitive capacities but also other abilities as, for example, the physical, artistic and spiritual” [43].

The theory advocates multiple learning styles and is designed to address individual types of intelligence. When teachers use different approaches to reflect multiple intelligences within their students, the process of providing and receiving knowledge can be improved [34]. Thus, understanding the importance of multiple intelligences within each individual help educators understand, theorise, and

provide different ways to help facilitate learning. This paper argues that the application of multiple intelligences theory can help us understand the role of the creative arts in the learning process of individuals on the autistic spectrum.

The literature argues that individuals with autism can often demonstrate preferences in or abilities at some types of intelligence over others. Because individuals with autism are considered to be more visual learners, presenting information verbally may prove unsuitable [58]. This is supported by the findings of studies [51] and [11] revealing that children with autism rely more on their visual-spatial abilities than they do on linguistic intelligence. Brownell also argues that “although it has been noted that students with autism are generally not aural, the music centres of the brain are separate and distinct from the receptive language centre” [39]. If researchers know that individuals with autism respond better to visual or musical stimuli compared to verbal language, they can help educators to employ strategies that promote and develop the abilities of individuals on the autistic spectrum.

Based on multiple intelligences theory, the creative arts can be theorised as a useful way of increasing the learning capacities of individuals with autism. They “actively engage children’s imagination through art, dance, dramatic play or theatre, puppetry, and music. The creative arts engage children across all domains cognitive, language, social, emotional, and physical” [26]. Artistic activities can be incorporated into all multiple intelligence domains [25] and have been linked to different regions of the brain [60]. Gardner points out that “the arts may be especially suited to encompass the range of individual intellectual profiles” [25]. If teachers are searching for a useful method of teaching children on the autistic spectrum, they should be advised to integrate the creative arts into their teaching practices [50].

The literature provides different examples regarding the use of the creative arts as a method of supporting individuals on the autistic spectrum. Drawing, for instance, is a useful activity that can be used to highlight individuals with autism point of view more successfully than written text or conversation [49]. Drawing, as nonverbal expression, can be used as a way of enabling children with autism to communicate their experiences [41]. Because children on the autistic spectrum are often visual thinkers, creating art may help them to relate their output to the world around them [48]. Drawings by children on the autistic spectrum usually reflect their visual thoughts as either “obsessions or preoccupations” [19]. Drawing is not only seen as way to gain information about children with autism, but it “becomes a structured method in building a more conducive environment” [63] for them. The use of drawing within the autistic spectrum can be beneficial;

“by helping children with autism progress from schematic (formulaic) drawing to the realm of representational drawing and symbolic thinking, art becomes a tool for them to make sense of their environment” [48].

The use of drawing for individuals with autism can be seen as a helpful instrument for teachers to gain access to their

world. Some studies have investigated the use of portrait drawing to help understand how children with autism recognise faces [48], [63]. These studies concluded that portrait drawing could be a useful way of teaching face recognition for children on the autistic spectrum [48], [63]. Although creating a drawing involves short-term memory, linking a visual object to an idea involves long-term memory [60]. In this regard, creating symbols and signs during art activities can help children with autism to remember information and apply it appropriately [27]. This emphasises the role of visual art as a way of improving the retention of information for individuals on the autistic spectrum.

Examples of the role of the creative arts within practices such as dance and drama therapy for individuals on the autistic spectrum are found in different studies. One study examined the impact of using dance movement therapy on the way adults with autism create a clay sculpture of a human figure [53]. It was found that participants’ sculptures improved significantly after attending the dance movement therapy sessions in different areas of the Body-Image-Sculpture-Test: proportions, dimensions, completion, connectedness, and surface quality [53]. Another study used dance movement with children on the autistic spectrum to increase their range of self-expression [32]. Other art forms such as music, drawing, and sculpting were also provided for participants as props to help them discover ways to express themselves creatively. The findings indicated that reduction in anxiety levels was a common improvement among participants. Additionally, all participants showed varying degrees of improvement in the following areas: communication, decision-making, listening skills, verbal skills, physical expression, spatial awareness, maintaining attention, and following directions [32].

Drama therapy also provided promising results in helping individuals on the autistic spectrum. A study examined the efficacy of an intervention that involves drama therapy in developing social skills and reducing behavioural problems shown by children on the autistic spectrum [40]. The Social Skills Improvement System-Rating Scales (SSIS-RS) was used to measure the outcome for each participant. The rating system was completed by children with autism and their parents. The findings showed that significant changes appeared in the following areas: reduction in hyperactivity, inattention, externalizing and autism spectrum behaviours. In addition, the participants showed improved levels of in engagement [40]. Another study explored teachers’ and parents’ feedback on drama therapy programs offered in schools for children and young people on the autistic spectrum [15]. The feedback showed that drama therapy was beneficial in five thematic areas: 1) participants benefited from a safe environment in which they could explore and develop different experiences, 2) they obtained a better understanding of friendship as they developed better social interaction skills, 3) this interaction enabled them to participate in role play that gave them an opportunity to practice a wider range of social skills, 4) the structured content of the drama therapy sessions lead to a reduction in anxiety and improved confidence, 5) and the drama therapy offered supports for the community and

families as well as the participants themselves [15]. Therefore, the use of the creative arts within practices such as dance and drama therapy can be seen as a method promoting the multiple intelligences of individuals with autism by creating different opportunities for them to learn and communicate effectively.

The creative arts also help develop other areas for individuals on the autistic spectrum, such as interpersonal and intrapersonal skills. Artistic activities are considered to be enjoyable experiences and enjoyment can lead to an improvement in mood and a reduction in stress [60]. Involving children with autism in artistic activities can be useful in decreasing their anxiety and encouraging them to interact socially with others [47]. Using music with individuals on the autistic spectrum can also “aid regulation of emotion and moderate the bodily expression of moods, reducing anxiety and stress” [12]. Music can be used to “facilitate relationships, learning, self-expression, and communication” [29]. In addition, drawing activities can help children with autism develop a relationship and facilitate communication with others [48], [63]. This underscores the usefulness of using the creative arts to develop interpersonal and intrapersonal abilities for individuals with autism.

Multiple intelligences theory was not without its critics, however. Criticisms include a lack of empirical support and classroom-based [57], [37] as well as inappropriate use of the curriculum which leads all pupils to believe that they are clever [57]. In response to these criticisms, multiple intelligences theory is still considered valid because it is based on experimental research driven by different disciplines, including “cognitive and developmental psychology, differential psychology, neuroscience, anthropology, and cultural studies” [24]. Different examples have also been provided from educational research, which support the usefulness of the idea behind multiple intelligences theory [57]. The literature also highlights a number of studies that advocate the use of multiple intelligences theory in education (see for instance, [30], [56] and [16]). The multiple intelligences theory can help in showing the positive side of each learner’s abilities and offers them a way to enjoy successful experiences when learning [57]. The importance of multiple intelligences theory can be seen in the way it focuses educators’ attention on the different aptitudes that individuals on the autistic spectrum possess in order to help ensure their success in education.

Multiple intelligences theory can be useful as a theoretical framework for understanding how the creative arts can benefit individuals on the autistic spectrum. The literature shows that the creative arts are linked to all types of intelligence, and supports the idea that the creative arts can encourage individuals with autism across multiple intelligence levels. The creative arts can help individuals on the autistic spectrum to learn, communicate and construct relationships with others. The way the creative arts embodies the concept of change for individuals on the autistic spectrum supports its use in their education.

Although this paper consider social learning theory and multiple intelligences theory separately as theories that

possess some elements related to this research, they will not adequately meet the task on their own. The following section therefore discusses how the combined integration of these two theories can help in addressing the research aims.

C. The Integration of Social Learning Theory and Multiple Intelligences Theory

Developing a relationship between different theories can be useful when trying to clarify any aspect related to the research that is under investigation. In some cases using a single theory cannot address research question adequately or completely [33]. For this reason, integrating more than one theory may be beneficial. It can help researchers achieve a better understanding of a specific phenomenon and provide fuller answers to their questions [33]. As such, my research integrates two theories: social learning theory and multiple intelligences theory. The combined use of these two theories will provide a useful theoretical framework to help explore how combining Social Stories with the creative arts can assist individuals on the autistic spectrum in developing their responses. This provides the essence of the theoretical framework, which aims to show the importance of combining and integrating social learning theory and multiple intelligences theory. This importance is highlighted by showing the role that the creative arts can play (based on multiple intelligences theory) in offering more opportunities for individuals with autism to engage with learning Social Stories. The creative arts can also help in this respect by supporting the processes of observational learning: namely maintaining attention, retaining information, motoric reproduction, and motivation when learning Social Stories.

There are different ways in which Social Stories can be used with the creative arts. Any type of the creative arts can be used before, during, and after Social Stories, and uses can be for a variety of purposes. The creative arts, for instance, can help individuals with autism concentrate when learning Social Stories, helping them understand and remember the Story, communicate their understanding of it, reproduce its content through performance, and increase their motivation to engage with it. The creative arts can offer a safe and less socially challenging environment than the outside world, in which individuals with autism can practice the social interaction presented in Social Stories.

This section will now go on to suggest how the combination of social learning theory and multiple intelligences theory can help create insights into the ways in which combining Social Stories with the creative arts for individuals with autism can be beneficial. This will be approached by discussing empirical studies, which used Social Stories with the creative arts in the education of individuals on the autistic spectrum. Music for example, has been used in conjunction with Social Stories. Brownell argues that using musical Social Stories can help to encourage “repetitions of the story, increase cooperation during the intervention, and provide an avenue for recall of information contained within the Social Stories” [39]. When the study [39] examined Social Stories in a musical context, it concluded that Social Stories were effective in modifying the

behaviour of children with autism without and with music. However, it was also found that when music was used in conjunction with Social Stories, the desired behaviour was less frequently shown [39]. This can be seen as an indication of the usefulness of using musical Social Stories for individuals on the autistic spectrum. In another study [31], the aim of using music with Social Stories presented on smart board was to motivate children with autism. The researchers incorporated music from a cartoon film selected by the participants at the last Social Story slide, but there was no report on the effect of this incorporation. These studies [39] and [31] demonstrate how the exploration of connections between social learning theory and multiple intelligences theory can illuminate the reasons why music can be linked to retaining information and motivation. These, the studies argue, can be conceptualized as two important processes within observational learning when engaging with Social Stories.

Another illustration of using Social Stories with the creative arts is through drawing activities. One study examined the usefulness of a prototype consisting of audio-augmented paper with tangible tools for children with autism [1]. The study used visual Social Story cards with drawing activities to promote descriptive talking in order to examine the effectiveness of the prototype. Preliminary results revealed that the prototype was beneficial in the way it encouraged interaction between the therapist and the participants [1]. However, the study did not explore the usefulness of using visual Social Story cards with drawing activities for children on the autistic spectrum. Another study asked children with autism to draw scenes from their specified Social Stories when designing the stories [62]. However, the study [62] did not mention why it used drawing with Social Stories or its effect in developing change in the responses of children with autism. The literature on visual art demonstrates the benefits of using drawing as a visual strategy in facilitating understanding and the memorisation of information for individuals on the autistic spectrum. This means that the information produced through drawing activities can be seen as a way to help individuals on the autistic spectrum to retain and recall what they have learned. Drawing activities can also be described as a motivational tool for encouraging individuals with autism to communicate with others. The integration of social learning theory and multiple intelligences theory can be seen as a way of offering a greater understanding of how drawing activities together with Social Stories may offer opportunities for change for individuals on the autistic spectrum.

The use of role-play with Social Stories is another example. A study used role-play to model the answers to the Social Stories comprehension questions and showed that children's desired behaviour improved significantly when Social Stories were used [28]. The study reported that participants were able to maintain the learned behaviour for up to 10 months. This was the longest period of maintenance referred to in the literature on Social Stories [28]. However, the study did not report on the impact of using Social Stories with role-play in developing the behaviour of children on the autistic spectrum. It might be useful to consider this study in more depth as it

may offer a deeper understanding of the individual factors that may have been responsible for change. The use of Social Stories with role-play can be seen as a way of helping individuals on the autistic spectrum explain and retain the information held within the Stories. The integration of social learning theory and multiple intelligences theory can offer insight into our understanding of the ways in which the relationship between Social Stories and role-play create opportunities for individuals on the autistic spectrum.

From all the previous examples, it can be concluded that the combined use of social learning theory and multiple intelligences theory could provide new insights into how Social Stories, used alongside the creative arts, can be a useful strategy when helping individuals on the autistic spectrum understand different social situations and develop change in their responses.

There are some limitations that may arise from this theoretical framework, however. The usefulness of using the creative arts with Social Stories has not been fully examined. Only one study has examined the use of Social Stories with music for children on the autistic spectrum [39], and more research is needed to highlight positive and negative practices when Social Stories are used with the creative arts for individuals within the spectrum. Another possible limitation is that the idea of using Social Stories with the creative arts may not be preferred by some individuals on the autistic spectrum. However, the theoretical framework outlined in this paper aims to offer another perspective on how the creative arts can be used with Social Stories and how it could offer more opportunities to help individuals with autism to develop and succeed in their lives.

III. CONCLUSION

The paper argues that social learning theory can offer an explanation for the mechanisms behind Social Stories and how they can promote change for individuals on the autistic spectrum. Meanwhile, multiple intelligences theory can demonstrate the actual ways in which the creative arts strengthen the aptitude and knowledge of individuals on the autistic spectrum. If social learning theory and multiple intelligences theory are combined, they could form the basis of a strong theory which could be used to facilitate a theoretical framework to help explain and encourage changes in the responses of individuals on the autistic spectrum. This theoretical framework could then be applied empirically to the use of Social Stories with the creative arts for individuals on the autistic spectrum.

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