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Reviewing Instructional Studies Conducted Using Video Modeling to Children with Autism

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Abstract

This study explored 31 instructional research articles written using video modeling to children with autism and published in peer-reviewed journals. The studies in this research have been reached by searching EBSCO, Academic Search Complete, ERIC and other Anadolu University online search engines and using keywords such as "autism, video modeling, autism spectrum disorders with video modeling and video modeling interventions". It is observed that most of studies have been carried out with children with autism aged between 3 and 11. The studies have been categorized based on their scopes: studies conducted using only video modeling, video modeling studies in which subjects of studies are models, studies in which video modeling and additional practices are used together and studies in which video modeling is compared with other practices. It is observed also that results of studies have indicated that video modeling is effective on teaching social skills, play skills, language and communication skills, functional skills, self-care skills, and daily life skills to children with autism.

Key Words

Autistic Disorder (Autism), Video Modeling, Review, Research.

As a developmental disorder identified under umbrella term of Autism Spectrum Disorders or Pervasive Developmental Disorders, autistic disorder (autism) is characterized with limitations or deficiencies observed before age of 3 in social interaction, communication and stereotyped behaviours (Amerikan Psikiyatri Birliği, 2001; Diken, 2010). Individuals with autistic disorder (autism) show many difficulties during daily life because of limitations and deficiencies in social interaction, communication and showing stereotyped behaviours. One of the most important limitations individuals with autism face with is to independently start or initiate skills or behaviours they have acquired (Kırcaali-Iftar, 2007). Limitations in imitation skills, difficulties in eye-contact, language delay or limitations in use of appropriate language skills, limitations in using gestures are some of challenges individuals with autistic disorders face with (Wert & Neisworth, 2003). There have been several practices to deal with these challenges and to teach appropriate behaviours and skills to individuals with autistic disorders. However, it is vital that practices should be evidence-based. Among evidence-based practices, modeling has been reported as an evidence-based practice by National Autism Center (NAC) in the US in 2009. People or videos can be used as models in these practices. Peers or adults

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model targeted behaviour or skills to targeted individual with face-to-face interactions in peer or adult-modeling whereas videos of model behaviours or skills are used in video-modeling (NAC, 2009). Nikopoulos and Keenan (2003) define video-modeling as targeted individual imitate the same behaviours or skills in videos in which targeted behaviours or skills performed by an adult or peer.

Many researchers have been discussed several benefits of video-modeling. For example, video-modeling is more convenient since it might be hard to find live-model anytime needed (NAC, 2009) and individuals with autism prefer and respond well to teaching with visual clues; therefore, video-modeling is effective with these individuals (Shipley-Benomou, Lutzker, & Taubman, 2002). Moreover, video-modeling gives chances that models can be watched several times and watching videos can be a natural reinforcement which motivates these individuals (Chorlop-Christy et al., 2000; Corbertt, 2003; Corbertt & Abdullah, 2005).

The effectiveness of video-modeling in teaching various skills with individuals with autistic disorders has been reported in several studies such as on inappropriate behaviours (Graetz, Mastropieri, & Scruggs, 2006), daily life skills (Keen, Brannigan, & Cuskelly, 2007), self-care skills (LeBlanc et al., 2003), toilet skills (Keen et al., 2007), social skills (Nikopoulos & Keenan, 2003), play skills (D'Ateno, Mangiapanello, & Taylor, 2003), language and communication skills (Buggey, 2005; Wert & Neisworth, 2003). In addition, there have been several studies reviewing studies carried out with video-modeling (Ayres & Langone, 2005; Bellini & Akullian, 2007; Delano, 2007; Gül & Vuran, 2010; McCoy & Hermansen, 2007; Shukla-Mehta, Miller, & Callahan, 2010). However, some of these review studies focus on spesific skills (Ayres & Langone, 2005; Gül & Vuran, 2010; Shukla-Mehta et al., 2010), some focus on the models used in video-modeling (Bellini & Akullian, 2007; Delano, 2007; McCoy & Hermansen, 2007). The current study extends the knowledge level of the effectiveness of video-modeling by focusing on more recent studies (2000-2010) and reviewing these studies descriptively. Therefore, the purpose of this study is to inform practitioners and researchers and extend the knowledge level of the effectiveness of video-modeling by reviewing descriptively recent video-modeling studies carried out with individuals with autistic disorders.

Method

In the current study, studies conducted between 2000-2010 using video-modeling in teaching various skills to individuals with autistic disorders have been descriptively analysed through descriptive analysis method (Karasu, 2009).

Identifying Studies

Peer-reviewed journal articles including studies carried out with video-modeling with individuals with autistic disorders were included and reviewed in this study. Keywords such as "autism", "video modeling", "autism spectrum disorders with video modeling" and "video modeling interventions" were used in searching e-databases such as EBSCO, Academic Search Complete, and ERIC. As a result of e-search 31 studies have been reached. The following criteria have been used to include the studies in review process: (*a*) studies must be carried out with individuals with autistic disorders, (*b*) studies must be carried out with video-modeling, (*c*) studies must be published in peer-reviewed journals between 2000-2010.

Descriptive Analysis

Studies meeting the criteria and decided to be included in the review process have been descriptively analysed based on (*a*) topic, (*b*) targeted skill, (*c*) participants, (*d*) models, and (*e*) results. Based on these factors, studies were categorized under three main categories: (*a*) studies using only video-modeling, (*b*) studies in which participant was also a model (video-self modeling), (*c*) studies using video-modeling and other practices together, (*d*) comparative studies of video-modeling.

Results

Studies Using Only Video-Modeling

Out of 31 studies, 13 were studies using only video-modeling. These studies were related to social skills (Charlop, Dennis, Carpenter, & Greenberg, 2010; Nikopoulas & Keenan, 2003, 2004a), play skills (D'Ateno, Mangiapanello, & Taylor, 2003; MacDonald, Clark, Garrigan, & Vangala, 2005; MacDonald, Sacramone, Mansfield, Wiltz, & Ahearn, 2009; Nikopoulas & Keenan, 2004b, 2007; Nikopoulos & Nikopoulo-Syrni, 2008; Paterson & Arco, 2007; Reagon, Higbee, & Endicott, 2006), perspective taking skills (Charlop-Christy, & Daneshvar, 2003) and imitation skills (Tereshko, McDonald, & Ahearn,

2009). All studies were carried out with individuals with autistic disorders aged between 2-15. Peer models and adult models have been used in these studies. Follow-up data were collected in only 10 studies (Nikopoulas & Keenan, 2003, 2004a, 2004b, 2007; Nikopoulos & Nikopoulo-Syrni, 2008; MacDonald et al., 2005; MacDonald et al., 2009; Paterson & Arco, 2007; Reagon et al., 2006; Tereshko et al., 2009) whereas generalization data were collected in only 9 studies (Charlop-Christy & Daneshvar, 2003; Charlop et al., 2010; Nikopoulas & Keenan, 2003, 2004b, 2007; Nikopoulos & Nikopoulo-Syrni, 2008; Paterson & Arco, 2007; Reagon et al., 2006; Tereshko et al. 2009) and inter-observer/rater data were collected in 12 studies (Charlop-Christy & Daneshvar; Charlop et al., 2010; D'Ateno et al., 2003; MacDonald et al., 2005; MacDonald et al., 2009; Nikopoulas & Keenan, 2003, 2004a, 2004b, 2007; Nikopoulos & Nikopoulo-Syrni, 2008; Paterson & Arco, 2007; Tereshko et al., 2009). Treatment fidelity was collected in only one study (Charlop, Dennis, Carpenter, & Greenberg, 2010). Moreover, social validity data were collected in only 4 studies (Charlop et al., 2010; Nikopoulas & Keenan, 2003, 2004b, 2007).

Studies in which Participant was also a Model (Video-Self Modeling)

Out of 31 studies, video-self modeling has been used in only three studies in teaching social skills (Bellini, Akullian, & Hopf, 2007; Buggey, 2005; Wert & Neisworth, 2003). Among these studies, Buggey included other skills such as language production skills. Studies were carried out with 11 subjects aged between 3-11.

Studies Using Video-Modeling and Other Practices Together

Out of 31 studies, video-modeling and other practices together were used in 8 studies carried out with 20 individuals with autistic disorders aged between 3-13. Activity schedules (Dauphin, Kinney & Stromer, 2004), perspective taking skills (LeBlanc et al., 2003), identifying emotions (Corbertt, 2003), language skills (Maione & Mirenda, 2006), toilet skills (Keen et al., 2007), social interaction skills (Sansosti & Powell-Smith, 2008), free-time skills (Blum-Dimaya, Reeve, Reeve, & Hoch, 2010) social skills (Litras, Moore, & Anderson,, 2010) were some of skills targeted to be taught with video-modeling and other teaching practices together.

Comparative Studies of Video-Modeling

Out of 31 studies, video-model practices were compared with other practices in 8 studies. A total of 49 participants were between 3-11 age range. In these studies, various types of teaching modes such as video-modeling and using people as model (live-modeling), self-modeling and peer-modeling, video-modeling and error correction, direct instruction and video-modeling were used to explore the effectiveness of different teaching techniques with video-modeling. When reviewing these studies in detail, out of 8 studies, follow-up data were collected in only 3 studies (Gena, Couloura, & Kymissis, 2005; Sancho, Sidener, Reeve, & Sidener, 2010; Sherer et al., 2001). Follow-up data were not collected in five studies (Charlop-Christy et al., 2000; Kroeger et al., 2006; Marcus & Wilder, 2009; Murzynski & Bourret, 2007; Palechka & MacDonald, 2010). Generalization data were collected in only 4 studies (Charlop-Christy, Le, & Freeman, 2000; Gena et al., 2005; Sancho et al., 2010; Sherer et al., 2001). Moreover, social validity data were collected in only 2 studies (Kroeger, Schultz, & Nevsom, 2007; Sancho et al., 2001).

Conclusion and Suggestions

In the current study, 31 studies carried out on teaching various skills using video-modeling to individuals with autistic disorders were reviewed descriptively. It was noted that participants' age ranges in these studies were between 3 and 11. It was also noted that results of these studies showed that video-modeling was effective on teaching many behaviors or skills such as social skills, play skills, language and communication skills, functional skills, self-care skills, daily life skills. Based on the review process, it can be suggested that video-modeling can be used widely in practice on teaching various behaviors and skills to individuals with autistic disorders and other developmental disabilities. Regarding suggestions for future research, there is a need to have more comparison studies in which video-modeling and using individuals as models in studies (live-modeling) are being compared in order to see which one is more effective. There is also a need to have more studies showing social validity.

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