## **BAR-ILAN UNIVERSITY**

## The Perception of Death among Children with HFASD Compared to Normal Development

Shalhevet Moshkovitz

Submitted in partial fulfillment of the requirements for the Master's Degree in the School of Education, Bar-Ilan University

Ramat Gan, Israel

## **Abstract**

Background: Many studies examined the concept of death among subjects with typical development, however, this topic was not examined among subjects with autism, specifically high functioning autism. The concept of death is a complex and emotional process that includes the assimilation of five biological facts – the five sub-concepts of death: inevitability; universality; irreversibility; non-functionality and causality (Jaakkola & Slaughter, 2002; Speece & Brent, 1984). The concept of death is acquired throughout development (e.g., Hunter & Smith, 2008) and is known to be linked to the development of supportive cognitive functioning, such as perception of time, conservation ability, verbal ability and the like (e.g., Jenkins & Cavanaugh, 1986; Smilansky, 1981; Orbach, 1987; laughter & Griffiths, 2007). A link was found between biological knowledge that is manifested by the recognition of the main body parts and the understanding of the different functioning and processes in the human body, to a more mature perception of death (Jaakkola & Slaughter, 2002).

Studies conducted among Populations in Special Education, such as individuals with learning disability and intellectual disability, indicate a partial understanding of the concept of death, dependent on the cognitive and adaptive functioning (e.g., Mcvoey, Ried & Guerin, 2002; Mcevoy, MacHale & Tierney, 2012). Studies conducted among subjects with autism indicate a decrease in cognitive functioning linked or affecting the concept of death, such as: conservation ability (Bashrin, 2015), perception of time (Allman & Falter, 2015), verbal ability (Pexman et al, 2011; Froehlich et al., 2012) and the understanding and biological knowledge of life forms (Gopnik, Capps, & Meltzoff, 2000).

**Study goals:** The primary goal of this study was to learn how subjects with high functioning autism (IQ>75) understand the concept of death with emphasis on its cognitive components, and compared to a typical adjusted population. Furthermore, the study examined the connection between the concept of death and cognitive abilities linked to it among subjects on the autistic spectrum, as well as the link between biological knowledge and the perception of death.

Hypotheses: The current study has a number of hypotheses. The first hypothesized suggested that differences would be found in biological knowledge between the study groups and that lesser knowledge would be identified among subjects with autism compared to subjects with typical development. We further hypothesized that differences would be found in the general concept of death and in each of the sub-concepts of death (inevitability; universality; irreversibility; non-functionality and causality) among the study groups, and that these would be lowered among subjects with autism compared to subjects with typical development. Additionally, we hypothesized that a connection would be found between the sub-concepts of death and cognitive functions. Another hypothesis dealt with the connection between the severity of the disability (SCQ questionnaire) and the concept of death. We hypothesized that the more severe the disability is, the understanding of death concept will be lower. Finally, we hypothesized that cognitive abilities, such as verbal ability and intelligence, will pose a significant contribution in predicting the concept of death among the study groups.

**Method:** In the study participated 47 1<sup>st</sup>–3<sup>rd</sup> grade students: 22 subjects with high functioning autism and 25 subjects with typical development. The background variables (severity of the autism; socio-economic status; experience in grief and loss, chronological age and level of intelligence) were collected in evaluation test and background questionnaire transmitted to the parents during the study. After parental approval for their children's participation in the study was received,

followed an explanation on the nature of the study, each subject completed a series of tests over the course of 45 minutes to an hour and a half, which included two main parts that were transmitted in the same order to all subjects: the first part included an intelligence test (Raven, Court, Raven, 1977) and the Peabody test (language) (Dunn & Dunn, 1997). The second part included the following tests: a quantity conservation task, examination of the perception of time continuation, interview regarding the human body (to examine biological knowledge) and interview regarding the concept of death.

**Results:** According to the hypotheses of the study, it was found that biological knowledge in general, and biological knowledge regarding functioning in particular is significantly greater among subjects with typical development, compared to subjects with autism. In addition, differences were identified between the study groups in the understanding of life theorizers (concept of life), the general concept of death and in four of the five sub-concepts of death: (inevitability; universality; irreversibility; non-functionality and causality). In all these measures, the experimental group (high functioning autism) scored lower compared to subjects with typical development. Specifically, it was found that while most subjects with typical development exhibited a better understanding of death concept, most subjects with autism exhibited a partial understanding of the general perception of death. Alternative explanations to the lack of differences in the universality measure will be elaborated in the body of the study. Furthermore, as hypothesized, significant connections were found between the sub-concepts of death and the general perception of death to various cognitive functioning (preservation ability, verbal understanding, quantitative conservation, biological knowledge and the perception of life). The higher the cognitive functioning of the subjects, the better they perceive death. The only connection that was not significantly identified was the one between the achievements of the subjects in the intelligence and the sub-concept of non-functionality. This finding is significant as it indicates a direct connection between the concept of death and the subject's cognitive profile. Other studies found in professional literature dealt with this context in an indirect or partial manner.

Furthermore, and as hypothesized, there is a significant negative connection between the severity of the disability among the subjects with autism, and the general measure of the concept of death. The greater the severity of autism was, the more defective the understanding of death concept was. This finding can indicate that the understanding of the concept of death is probably related to the characteristics of autism (understanding social and emotional situations surrounding the topic of death) beyond their cognitive abilities.

Finally, it was found that among subjects with autism, the demographic – socioeconomic situation affects the concept of death and contributes over half of the explanation for its variance. Thus, the higher the socio-economic status of the subjects is, the better is his perception of death. Furthermore, the conservation ability predicted approximately ten percent for the variance of the perception of death. Nevertheless, among subjects with typical development, the conservation ability predicted over half of the explanation for the variance of the perception of death. It appears that the fact that the conservation ability (basic cognitive ability) serves as basis for the understanding of death among the two study groups. additionally, the Raven test (examining intelligence) contributed additional twenty percent for the variance of the concept of death among this group. It can be assumed that children with difficulties and from special education are initially at a lower starting point regarding the advancement of their development, therefore, a low socioeconomic status may lead to lower general and cognitive development and in particular, the concept of death.

Conclusions: The current study provides us with an additional understanding of the autistic population in general, and specifically of children with high functioning autism. It is possible that the partial/lowered concept of death identified is linked to the fact that children, adolescents and adults with autism are more prone to suicides. Therefore, it appears as educational interference can improve the knowledge of children of the concept of death. Moreover, a parent-child discourse held in an adaptive, approachable and understanding manner, can assist children in formulating a better biological perception of the death concept.