

## ExampleChapter 2: Literature Review

### Introduction

Parents of children with ASD are often overlooked when society is considering the challenges that face the family as a whole. Most focus goes to ASD children, yet parents of ASD children have reported increased levels of stress and low levels of support information, ~~calling out the need for more interventions for engagement, support, and participation~~ (Buzhardt et al., 2016). The problem is that parents of ASD often avoid the problems created by their ASD children ~~or engage in denial coping strategies~~, rather than being involved. Current literature reveals that exposure to ABA and ACT with ASD interventions could improve parental involvement with their children, but research is lacking ~~into this possibility has been lacking~~ (Corti et al., 2018). The purpose of this quantitative causal-comparative research study is to examine if exposure to both ABA and ACT demonstrates higher perceived parental involvement among ASD parents ~~parents of children with ASD~~ compared to those who only engage in ABA ~~are only exposed to ABA from the behavior therapists~~.

The current literature has revealed many ~~glaring~~ weaknesses in the way parents engage with ASD and its ~~many~~ approaches to treatment. Parents have admitted to being uninformed regarding the types ~~and availability~~ of treatments, and even when they are informed, many are distant and unengaged, ~~inconsistently participating in those treatments or never doing it at all~~ (Stanislaw et al., 2019). Applied Behavior Analysis (ABA) has been identified as an effective intervention for children with ASD, ~~h~~However, various parents continue to be inexperienced and unfamiliar with its application (Raches et al., 2018). Research has shown that integrating ABA with other ASD interventions effectively empowers parents ~~in helping with the ability to help~~ their children with ASD (Raches et al., 2018). Combined with ACT ~~Acceptance and Commitment Therapy (ACT)~~,

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the ~~engagement and~~ involvement of parents with ASD children could potentially be raised. Still, there is a gap in the literature regarding the effectiveness of ACT in enhancing the perceived parental involvement of parents in assisting their children with ASD when used ~~in combination~~ with ABA. This gap ~~in the literature~~ is what this study aims to address.

Several authors have underscored various issues regarding treatment approaches for ~~ASD autism spectrum disorder (ASD)~~. ~~For example,~~ parents reported being confused and uninformed ~~regarding with respect to~~ the availability of different combinations of treatment approaches for ASD (Wetherston et al., 2017). ~~Parents~~ ~~That is to say, parents~~ of children with ASD ~~are remain~~ unfamiliar with the range of treatments available for ASD. Only 13% of the parents in one study had a practical understanding of the procedures ~~for ASD~~ (Wetherston et al., 2017). This is vital to address given that the experienced stress and lack of information, guidance, and support could ~~potentially~~ result in low ~~rates of~~ participation and engagement of parents in the ASD interventions. Parents of children with ASD are ~~disengaged and~~ inconsistent in participating in programs and treatments for ASD (Prapaththanakunwong et al., 2018)). ~~Applied behavior analysis (ABA)~~ ~~ABA~~ has been identified as an effective intervention for children with ASD. However, ~~various~~ parents continue to be ~~inexperienced and~~ unfamiliar with its application (Grigorenko et al., 2018). This inexperience with ABA results in even lower rates of participation and engagement of parents in the ASD interventions (Grigorenko et al., 2018). Therefore, parents need to be guided and trained in ABA applications, as well as other ASD interventions. This could result in increased rates of parent engagement for children with ASD (Fenning & Butter, 2019).

Research has shown that integrating ABA with other ASD interventions ~~effectively~~ empowers parents with the ability to help their children with ASD (Raches et

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al., 2018). Raches et al. (2018) ~~noted that with~~ ~~underscored that, with~~ the integration of ABA with other ASD interventions, parents of ASD children are better equipped ~~and more knowledgeable~~ in caring for their children and helping them ~~acquire and~~ develop functional skills. ~~TAs such,~~ the researcher believes it is vital to explore how ABA could be integrated ~~effectively and~~ optimally with other ASD interventions. One possible complementary intervention with ABA is ~~ACT~~ Acceptance and Commitment Therapy (ACT). ACT ~~focuses~~ ~~interventions focus~~ on enhancing the psychological flexibility of parents of ~~ASD children~~ ~~children with ASD~~ with the aim of improving their behaviors and commitment. Studies on ACT have primarily focused on the psychological functioning of parents who have children with ASD (Corti et al., 2018). However, there is a gap in the literature regarding the effectiveness of ACT in enhancing the perceived parental involvement of parents in assisting their children with ASD when used ~~in combination~~ with ABA. This is vital ~~since to explore given that~~ healthcare professionals strive to find more effective and evidence-based interventions for ASD care (Ghanadzade et al., 2018).

~~The possible implications can adversely affect the United States in its entirety, especially parents with children with ASD (Antill, 2019). Based on Hayes' (1993) RFT of ACT, if this problem is better understood, findings from this study could inform psychologists, psychiatrists and therapists to better understand the needs of the parents of children with ASD, as well as methods for supporting parents of children with ASD (Bell & Harris, 2017). The findings from this study could provide some empirical evidence about the possible benefit of integrating ACT with ABA in order to enhance the involvement of parents whose children have been diagnosed with ASD and are undergoing interventions from behavior therapists. If the results of the study indicate significant differences in perceived parental involvement among parents of children with ASD compared to those who are only exposed to ABA from the behavior therapists,~~

~~therapists may be motivated to implement this solution, given the possible effectiveness of ACT in enhancing perceived parental involvement of parents in assisting their children with ASD when used in combination with ABA (Bell & Harris, 2017)..~~

In this chapter, the researcher provides the process and strategy of identifying relevant literature, the conceptual framework, the study's population ~~and as well as~~ a review of research related to experiences of parents in ASD interventions, the role of parents in ~~applied behavior analysis (ABA)~~, and ~~acceptance and commitment therapy (ACT)~~ for parents of children with ASD. The researcher then presents the details of the framework based on the Relational Frame Theory (RFT) of ACT, which was developed by Hayes (1993). Discussions about the integration of interventions for parents of children with ASD, ways to empower parents with their ability to help their children with ASD, and enhancing the psychological flexibility aimed at this population follow. Chapter 2 concludes with the synthesis of the most relevant literature related to the study and critical points to consider for its purposes.

### **Literature Search Strategy**

The articles for this research study were accessed from the internet, archived and written articles, journal articles, and primary archival data. Multiple search engines were used, including Google Scholar, ERIC, Global Health, Ingenta Connect, JSTOR, Journal Storage, EBSCOhost Online Research Databases, and Journal Seek. The key search terms and combinations of search terms queried in online databases were as follows; *acceptance and commitment therapy, ACT, applied behavior analysis, ABA, autism, autism spectrum disorder, ASD, eclectic interventions for ASD, behaviors therapists, Relational Frame Theory (RFT) of ACT, and parents of children with autism*. The search terms were used to find literature on the main variables of this dissertation. The scope of the literature review was limited to research published within the last five years, with the

exception of Hayes' RFT, which was published in 1993. The reasoning is that the search terms were relevant to Relational Frame Theory (RFT) of ACT, coping strategies and methods for parents with children with autism, and research groups focusing on the topic, expanding the study's considered aspects of the problem.

### Theoretical Foundation

The theoretical basis for this dissertation will be based on Hayes' (1993) Relational Frame Theory (RFT), which will be used because it is a proven method of understanding human behavior in both contextual and functional ~~ways~~. RFT posits that humans learn communication through interaction with the environment. ~~This will be expanded upon later in this chapter. Still, in brief,~~ The concept that behaviors and communication patterns can be changed or enhanced by engaging in purposive interaction -will aid the researcher in understanding if exposure to both ABA and ACT demonstrates higher perceived parental involvement among parents of children with ASD compared to those who are only exposed to ABA ~~from the behavior therapists~~, making RFT the ideal theoretical foundation for the problem being addressed (Hayes, 1993).

RFT ~~is being used as the theoretical framework because it is one of the few ways to judge human behavior functionally and contextually accurately, making it~~ ideal for determining the effect of ABA and ACT integration of ASD practices on parents. ~~(Hayes, 1993).~~ The main argument of RFT is that humans learn communication through their interaction with the environment, a process called functional contextualism (Hayes, 1993; Timmer et al., 2018). ~~Functional contextualism is the basis of RFT and takes the philosophical position that antecedents influence psychological phenomena within a specific context (Hayes, 1993).~~ Serving as the theoretical rationale of ACT as a therapeutic approach, RFT argues that behaviors and communication patterns can be changed or enhanced by engaging in purposive interaction by relating events, mutually

and in combination arbitrarily, and to change the functions of events based on these relations to explain complex human behaviors such as feelings, emotions, and thoughts (Lamar et al., 2014). The assumption is thought to be that an undesirable thought, action, or emotion should be modified by changing the form, frequency, or situational sensitivity of private events themselves (Hayes, 2004).

~~The independent variable of the study is the type of intervention received from the behavioral therapists (ABA only and ABA plus ACT). The dependent variable of the study is perceived parental involvement: the variable of perceived parental involvement will be measured through the utilization of the Parent Involvement Questionnaire (PIQ)—therapist version (Solish, Perry, & Shine, 2015). The target population of this study will include the behavior therapists of parents whose children have ASD and are currently participating in behavioral interventions.~~

RFT guides this study by providing the rationale for the hypothesis that parents of children with ASD who received ABA training and ACT from behavior analysts would have higher perceived parent involvement in ABA compared to parents of children with ASD who only received ABA training from behaviors analysts. From past research studies, it is evident that RFT provides conceptual and procedural guidance for the development of therapeutic interventions such as ACT (Bell & Harris, 2017; Timmer et al., 2018). The six core processes of ACT can be applied in the theory of RFT to change the thoughts and language patterns of parents whose children have ASD.

~~With these constructs related to the RFT, behavior therapists of parents of children with autism may draw upon this study's results to effectively use specific program interventions to enhance the involvement of parents whose children have been diagnosed with ASD and are undergoing interventions from behavior therapists. Developing effective program interventions for parents of children with autism may be~~

~~possible through a better understanding of perceived involvement among parents of children with ASD, given exposure to both ABA and ACT (Vahey et al., 2017).~~

### Literature Review Related to Key Variables

In the following section, I discuss critical variables in this study. The independent variable of the study is the type of intervention received from the behavioral therapists (ABA only and ABA plus ACT). The dependent variable of the study is perceived parental involvement: the variable of perceived parental involvement will be measured through the utilization of the Parent Involvement Questionnaire (PIQ) – therapist version (Solish, Perry, & Shine, 2015). The target population of this study will include the behavior therapists of parents whose children have ASD and are currently participating in behavioral interventions to provide a background as it applies to research.

### Literature Review Matrix

The literature review matrix will provide an overview of the authors and topics in Chapter 2. It is organized in a meaningful way in which the resources relate to the chapter.

Literature Review Matrix	
Introduction	
<ul style="list-style-type: none"> <li>● Buzhardt et al. 2016</li> <li>● Corti et al. 2018</li> <li>● Stanislaw et al. 2019</li> <li>● Raches et al. 2018</li> <li>● Wetherson et al. 2017</li> <li>● Praphatthanakunwong et. al 2018</li> </ul>	<ul style="list-style-type: none"> <li>● Grigorenko et. al 2018</li> <li>● Fenning &amp; Butter 2019</li> <li>● Ghanazade et. al 2018</li> <li>● Antill 2019</li> <li>● Hayes 1993</li> <li>● Bell &amp; Harris 2017</li> </ul>

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<b>Theoretical Foundation</b>	
<ul style="list-style-type: none"> <li>● Hayes 1993</li> <li>● Timmer et. al 2018</li> <li>● Larmar et. al 2014</li> <li>● Hayes 2004</li> </ul>	<ul style="list-style-type: none"> <li>● Solish et. al 2015</li> <li>● Bell &amp; Harris 2017</li> <li>● Timmer et. al 2018</li> <li>● Vahey et. al 2017</li> </ul>
<b>Literature Review Related to Key Variables</b>	
<ul style="list-style-type: none"> <li>● Solish et. al 2015</li> </ul>	
<b>The Experiences of Parents in ASD Interventions</b>	
<ul style="list-style-type: none"> <li>● Soenans et. al 2018</li> <li>● Jacobs et. al 2019</li> <li>● Dieleman et. al 2018</li> <li>● Estes et. al 2019</li> <li>● Riossa &amp; Weiss 2018</li> <li>● Teo &amp; Lau 2018</li> <li>● Lunksy et. al 2018</li> <li>● Mostafa 2019</li> <li>● Stanislaw et. al 2019</li> </ul>	<ul style="list-style-type: none"> <li>● Antill 2019</li> <li>● Shepherd et. al 2018</li> <li>● Yi et. al 2019</li> <li>● Zody 2017</li> <li>● Turns et. al 2019</li> <li>● Lo 2017</li> <li>● Hartley et. al 2018</li> <li>● Papp &amp; Hartley 2019</li> </ul>
<b>The Role of Parents in <del>Applied Behavior Analysis</del> (ABA)</b>	
<ul style="list-style-type: none"> <li>● Makrygianni et. al 2018</li> <li>● Callahan et. al 2019</li> <li>● Grigorenko et. al 2018</li> <li>● Cassell 2019</li> <li>● Hajhashemi, Caltabiano, &amp; Lovisotto, 2016</li> <li>● Denne et. al 2017</li> </ul>	<ul style="list-style-type: none"> <li>● Kohli and Kohli 2016</li> <li>● Blackman 2017</li> <li>● Duffney 2019</li> <li>● Bagaiole et. al 2017</li> <li>● Ingersoll, Straiton, and Caquias 2019</li> <li>● Dai et. al 2018</li> </ul>

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<b><u>ACT Acceptance and Commitment Therapy (ACT) for Parents with ASD</u></b>	
<ul style="list-style-type: none"> <li>● Raches et. al 2018</li> <li>● Lunskey et. al 2018</li> <li>● Fung et. al 2018</li> <li>● Gould et. al 2018</li> <li>● Joekar et. al 2016</li> <li>● Hahs et. al 2019</li> </ul>	<ul style="list-style-type: none"> <li>● Poddar et. al 2017</li> <li>● Lamb 2018</li> <li>● Ahmadi 2019</li> <li>● Heidarian et. al 2017</li> <li>● Zody 2017</li> <li>● Whittingham et. al 2019</li> </ul>
<b>Integration of Interventions for ASD</b>	
<ul style="list-style-type: none"> <li>● Raches et. al 2018</li> <li>● Vivanti 2017</li> <li>● Robles et. al 2019</li> <li>● Cachia et. al 2016</li> <li>● Booth et. al 2018</li> <li>● Colebourn et. al, 2017</li> <li>● Marleau et. al 2019</li> <li>● Booth et. al 2018</li> <li>● Dai et. al 2018</li> </ul>	<ul style="list-style-type: none"> <li>● Noblejas et. al 2016</li> <li>● Pickard &amp; Ingersoll 2017</li> <li>● Leadbitter et. al 2018</li> <li>● Rutherford et. al 2019</li> <li>● Zhou et. al 2019</li> <li>● Feldman 2016</li> <li>● Klein &amp; Kemper 2016</li> <li>● Pennefather et. al 2018</li> </ul>

### **The Experiences of Parents in ASD Interventions**

Parents of children who were diagnosed with ASD face various challenges that are not commonly encountered by parents with children without ASD. Parents of children with ASD have increased needs for support due to heightened stress (Soenens et al., 2018). [A Jacobs et al. \(2019\) explored this topic further and conducted a](#) qualitative interview-based study to explore the experiences and perceptions of parents of children

with ASD ~~revealed several themes. The themes that emerged from the data analysis were;~~ (a) expectation, certainty, and exculpation, (b) the potential vulnerability of the parent's child, and (c) both pragmatism and disappointments (Jacobs et al., 2019, p. 6). Having also explored the need-related experiences and behaviors of parents of children diagnosed with ASD, Dieleman et al. (2018) ~~concurred. Dieleman's study~~ found that most parents of children diagnosed with ASD had experiences and behaviors that were associated with basic psychological needs. ~~These various studies The findings of these various studies could provide empirical literature regarding the needs and experiences of parents of children who are diagnosed with ASD. Still, at the same time, it~~ underscores the need for more exploration regarding this topic among parents of children who are diagnosed with ASD to determine specific needs that are crucial to address (Dieleman et al., 2018).

According to Estes et al. (2019), parents experience the impact of intervention directly, through interaction with providers within the health care and educational systems. It is vital to explore the experiences of parents of children with ASD and understand how this population group can be better supported, especially in caring for their children (Riossa & Weiss, 2018). In the study by Estes et al. (2019), it was added that parental stress and psychological well-being are issues that need to be addressed in interventions. This is vital given that parents are major contributors to family adaptive functioning. Parents' capacities to meet and carry out adaptive functions are significantly associated with their levels of stress and psychological well-being (Estes et al., 2019). As such, Estes et al. (2019) noted the need to examine the effects of early autism intervention on parents and family adaptive functioning; such interventions include early intensive behavioral intervention, parent-implemented intervention, and programs directly targeting parent stress. Riosa and Weiss (2018) added that, in the course of

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examining the impact of autism intervention on parents, there is a need to explore the perceptions and experiences of parents of children with ASD.

According to Teo and Lau (2018), gathering information on parental needs and desires in terms of ASD interventions could effectively aid in the development of new strategies for ASD educators and therapists to work effectively with parents or caregivers. As such, this could underscore and justify the need to further explore and assess the effects of ASD interventions on parents to develop effective and new strategies for helping them hone their skills and potential (Teo and Lau, 2019).

Parents of children who are diagnosed with ASD often experience psychological distress. ~~Studies by~~ Lunksy et al. (2018) and Mostafa (2019) ~~examined~~ ~~noted that parents with children diagnosed with ASD are mostly in need of intended X to improve the psychological well-being of parents, particularly among mothers. Mostafa (2019) indicated similar findings, examining~~ the stress and coping strategies of parents of children with ASD. The results of the exploration stated that 60% of the parents of children with ASD experienced a moderate level of stress, ~~and~~ ~~The findings also revealed that~~ 50% were actively seeking information about ASD, avoiding the situation, or engaging in denial coping strategies. ~~Finally, The~~ ~~the findings of Mostafa's (2019)~~ research also showed a significantly positive relationship between stress level and coping strategies, ~~which means that higher levels of stress are associated with higher levels of coping.~~ This body of literature further highlights the need for more effective coping interventions and strategies for parents of children with ASD. ~~Developing effective interventions for parents of children with ASD could significantly lower stress levels among this population, enabling parents to better care for their children with ASD.~~

There is a limited number of effective and clear interventions for parents of children with ASD. Stanislaw et al. (2019) noted this in their study, stating that due to

elevated stress levels and the lack of information and support, the participation and the engagement of parents in the interventions intended for children with ASD remains low and inconsistent. Stanislaw et al. (2019) added that the lack of available, clear interventions for ASD has led many parents to be confused and uninformed. Furthermore, barriers among parents exist in accessing interventions for their children with ASD, which results in the lack of engagement of parents in needed interventions (Shepherd et al., 2018a).

Yi et al. (2019) added to these findings, examining parents' experiences of screening, diagnosis, and intervention for children with ASD. The researchers conducted their mixed-methods study among 249 parents of children with ASD, wherein the authors administered open-ended questions to the participants regarding their experiences and views of ASD service provision. The findings of their study showed that parents often encountered significant delays from screening and diagnosis to intervention due to limited resources for ASD. Parents also reported being confused and frustrated throughout ASD interventions and services, noting a lack of a coherent system for diagnosis and family needs assessment. This body of knowledge highlights the need for more effective interventions and services for parents of children with ASD, ~~and also - More research is needed regarding the experiences of parents of children with ASD to capture their needs and specific challenges. This body of findings~~ underscores the need for more examination regarding the available interventions for parents of children with ASD ~~and, as well as examining~~ the methods that could increase parental access to these interventions (Yi et al., 2019). ~~This could be used as an empirical reference to the current study that is examining how to effectively develop integrated intervention programs for parents of children with ASD (Shepherd et al., 2018a).~~

Marital dissatisfaction and parental stress among couples of children with ASD are common (Zody, 2017). Several authors, such as Zody and (2017) and Turns et al. (2019), found that parents of children with ASD often experience stress that could cause marital tension and difficulties.

Lo (2017) concurred, noting how marital dissatisfaction is commonly found among parents of children with ASD. The study delved into this topic further, examining the link between stress, marital satisfaction, and behavior problems of parents raising a child with ASD. Lo also examined whether the child's behavior problem influenced higher stress levels and lower marital satisfaction and found that the problematic behavior of the children was significantly associated with parenting stress, impacting marital relationship quality (Lo, 2017).

Hartley et al.'s (2018) ~~study added to these findings~~, examining marital interactions and parenting stress in families of children with ASD. ~~by. Their study examined~~ daily spillover between the level of parenting stress and marital interactions in a sample of 176 married couples who have a child with ASD. The results of their dyadic multilevel modeling analyses showed that a higher number of negative marital interactions were associated with a higher level of parenting stress for both mothers and fathers of children with ASD. Conversely, a lower number of positive marital interactions was related to having a more stressful parenting day, especially for mothers of children with ASD (Hartley et al., 2018). ~~This pool of findings provides more in-depth knowledge regarding the importance of addressing parental stress among parents of children with ASD.~~

Other studies examined child-present and child-themed marital conflict in the daily life of parents of children with and without ASD. The findings of these studies showed that parents of children with ASD reported having more disputes in everyday life

with any children present and more conflicts with the target child present than their counterparts with typically developing children did (Papp & Hartley, 2019). As such, parents of children with ASD are likely to experience marital conflict, primarily due to the child being present during the conflict, as well as discussions of child-themed conflict topics. These factors were found to be significant predictors of higher levels of behavior problems in daily life, which are linked to marital conflict. This is vital to address given that leaving parental stress unaddressed could lead to adverse marital relationship outcomes among parents of children with ASD (Hartley et al., 2018; Lo, 2017; Papp & Hartley, 2019).

#### **The Role of Parents in ~~Applied Behavior Analysis~~ (ABA)**

~~ABA~~ Applied behavior analysis (ABA) has been identified as ~~an effective~~ ~~intervention for children diagnosed with ASD (Makrygianni et al., 2018).~~ According to Makrygianni et al. (2018), ~~ABA interventions are~~ effective in enhancing outcomes among families of children with ASD (Makrygianni et al., 2018). ~~Often used for children with ASD,~~ ABA can be conducted as a training method to increase IQ scores, communication, and language skills of children with ASD (Callahan et al., 2019).

~~Several authors examined ABA and its impact on children with ASD and found that ABA can effectively increase the creativity and language skills of children with ASD (Callahan et al., 2019; Grigorenko et al., 2018).~~ Makrygianni et al. (2018), for example, conducted a meta-analytic study to examine the effectiveness of ABA interventions for children with ASD. The results of the meta-analytic study revealed strong replication of previous findings indicating the effectiveness of ABA interventions among children with ASD (Makrygianni et al., 2018).

Additionally, Callahan et al. (2019) found strong support for the use of ABA as an ~~intervention for children with ASD.~~ The authors of the study found that parents of

children with ASD preferred behavioral artistry (BA) descriptors for ABA therapists compared to non-BA descriptors. BA refers to those collections of therapist behaviors such as care, attentiveness, and creativity that are considered essential in the effective delivery of ABA. This pool of findings further underscores the need to explore ABA as an intervention for parents of children with ASD, given its significant and positive impact on children with ASD (Callahan et al., 2019; Makrygianni et al., 2018).

Parents of children with ASD also benefit from ABA-based programs. Cassell (2019) Several scholars noted that parents' stress levels due to the care of individuals with ASD could be addressed through ABA interventions (Cassell, 2019; Hajhashemi, Caltabiano, & Lovisotto, 2016). In a study Cassell (2019) examined how participation in ABA treatment impacts parental stress. Employing 58 parents of children with ASD, Cassell (2019) conducted four assessments: Caregiver Strain Questionnaire, Aberrant Behavior Checklist, Family Support Survey, and Family Needs Survey. The author utilized a regression model to analyze the data: the results showed that parental stress is predicted by child utilization of psychotropic medication.

Furthermore, it was found that ABA interventions such as hours per week and parental involvement did not predict stress. Participation in ABA interventions results in less stress on average (Cassell, 2019). Hajhashemi et al. (2016) concurred, examining parental stress, affective symptoms, and marital satisfaction in parents of children with ASD. The authors employed parents of children with ASD as participants in their study; the authors assigned the parents to different programs: Applied Behavior Analysis (n=15), Early Intervention Centre (n=13), and no formal program (n=16). The findings of their study showed that parents of children with ASD in the ABA group reported significantly lower parental stress levels, lower affective symptoms levels, as well as higher marital satisfaction levels compared to the other two groups. These results

highlight the beneficial impact of ABA interventions on parents of children with ASD.

~~Not only is ABA effective in reducing stress levels, but it can also have a positive impact on the family unit, improving overall marital satisfaction.~~ This body of findings provides empirical evidence regarding the effect of ABA interventions for parents of children with ASD and. ~~These findings also highlight further in reducing the possible sources of parental stress. Higher levels of involvement in ABA interventions could significantly decrease parental stress (Cassell, 2019; Hajhashemi et al., 2016).~~

ABA interventions could become an approach to autism education of parents. According to Denne et al. (2017) and Kohli and Kohli (2016), parents may be supported and educated regarding autism through ABA interventions, ~~as well as their children with autism~~. To evaluate parents' perceptions regarding ABA, Denne et al. (2017) developed and tested, ~~using an internet survey method~~, the Parental Beliefs about ABA and Autism scale (P-BAA), ~~to assess parents' perceptions regarding ABA for autism education~~. The findings revealed that ~~any form of behavioral based approach, such as ABA~~, significantly predicted parent education, knowledge levels, and child diagnosis. Kohli and Kohli (2016) examined parents' perceptions regarding ABA and its effectiveness. The authors conducted an assessment and training curriculum based on ~~ABA applied behavior analysis~~ procedures to train family members of children diagnosed with autism. The authors proposed the integration of electronic skill assessment tools (VB-MAPP or Verbal Behavior Milestones Assessment and Placement Program) and a web-based training curriculum of ten videos. These videos and assessments were designed and developed based on ABA principles for children diagnosed with autism (Kohli & Kohli, 2016). In their study, the web-based training curriculum integrated cultural, language, and affordability factors, to be utilized by family members of the children diagnosed with ASD to improve their ABA therapeutic skills. After the program, parents demonstrated a



higher rate of skill acquisition, ~~yielding positive feedback from the parents. This was found to be true~~, especially when the mother was trained on ABA procedures. In implementing ABA procedures, it should be noted that parents need to work with their children on the same goals as those practiced at the autism clinic for the ABA intervention to be most effective (Kohli & Kohli, 2016). This body of knowledge provides more empirical information regarding the effectiveness of ABA procedures and ways that ABA principles could be used to develop intervention programs for parents of children with ASD. This could yield positive results on supporting parents and developing the required skills in caring for their children with ASD (Kohli & Kohli, 2016).

ABA intervention programs are also effective in online-delivery settings. Several authors noted the need for more ABA-oriented online programs for parents of children with ASD in coping with stress (Blackman, 2017; Duffney, 2019). Duffney (2019) examined the impact of online ABA training on stress levels of parents with a child with ASD through a quantitative study. The study ~~also~~ examined the effects of an online ABA training program, ~~which consisted of 22 videos. The online program entailed a total of 4½ hours to complete. The study and~~ also evaluated parenting stress levels through the Parenting Stress Inventory Short Form and self-reported scores, measured before and after the training. The results of the study showed that after the ABA training, parents reported decreases in stress levels significantly from baseline to posttests in both measures ~~(Parenting Stress Inventory Short Form and through self-reported scores)~~ (Duffney, 2019). Blackman (2017) reported similarly, as the author conducted a study to compare the impact of online and in-vivo parent training on the parental acquisition of skills in promoting appropriate behaviors in children diagnosed with ASD. The study reported that the most common method to provide parent training is thorough in-vivo

training, which can be costly and time-consuming. ~~Therefore, online ABA training could be used as a cost-effective alternative for parents of children with ASD (Blackman, 2017). The author found this in her study, assessing the efficacy of online, self-paced parent training through standardized (Parental Stress Index—Short Form, Parental Sense of Competence) and direct knowledge assessment, including levels of parent-child interaction.~~ The findings showed that after the online ABA training, participants reported significant decreases in parental stress, increases in knowledge regarding ASD, and increases in parent-child interaction (Blackman, 2017). Therefore, this body of findings could provide empirical conclusions regarding the effectiveness of ABA training programs for parents of children with ASD, even when it is delivered in an online setting . As such, the online ABA training program could be utilized as an effective tool for decreasing parenting stress and general stress levels, while also being more efficient~~est~~ effective (Blackman, 2017; Duffney, 2019)..

Even though ABA training has been identified as an effective intervention for children diagnosed with ASD, many parents continue to be inexperienced with its application. ~~Several authors noted this in their studies, such as Bagaiolo et al. (2017), Grigorenko et al. (2018), and Ingersoll, Straiton, and Caquias (2019).~~ Bagaiolo et al. (2017) found in their study that programs with ABA techniques have low rates of compliance among parents of children with ASD. This is due to the lack of knowledge regarding the application of ABA techniques even after playing video modeling training (Bagaiolo et al., 2017). This is vital to address given that ABA techniques (delivered online or through videos) are one of the most promising and cost-effective ways to improve social skills for parents with ASD children.

Furthermore, Ingersoll et al. (2019) underscored this in their study's findings, examining the use of ABA for parent training with children with autism. ~~The study~~The

~~authors of the study highlighted the importance of parent training, wherein providers teach parents intervention strategies to promote their children's skill acquisition and/or behavior management.~~

~~Further examining this topic, the authors~~ administered questionnaires online to 1,089 ABA providers. The findings showed that only 15% of ABA providers used manualized parent training programs. This resulted in lower levels of training extensiveness and a lack of knowledge among parents of children with ASD (Ingersoll et al., 2019).

Conversely, the use of manuals in parent training programs was a significant predictor of training extensiveness, impacting, and predicting providers' parent training use. As such, ABA providers could enhance the effectiveness of training programs for parents of children with ASD by utilizing training manuals (Bagaiolo et al., 2017; Ingersoll et al., 2019). ~~Providers could use this as a reference in using manuals in parent training by reducing perceived barriers.~~

#### ~~ACT~~ **Acceptance and Commitment Therapy (ACT) for Parents with ASD**

~~ACT~~ Acceptance and Commitment Therapy (ACT) has been identified as an effective intervention for parents of children diagnosed with ASD. According to Raches et al. (2018), the ACT intervention focuses on improving the psychological flexibility of parents of children diagnosed with ASD, which enhances their behaviors concerning acceptance and commitment. ~~Lunsky et al. (2018) and Fung et al. (2018) delved into this topic further, noting that exposure to ACT was effective in reducing the level of stress of mothers who have children diagnosed with ASD~~ autism spectrum disorder. Also, Lunsky et al. (2018) noted that exposure to ACT training/intervention could be a helpful strategy/technique for alleviating the psychological and mental functioning difficulties experienced by parents. ~~The impact of ACT training/intervention as a strategy to reduce~~

~~psychological and mental functioning difficulties was mainly found to be significant among mothers).~~

~~Furthermore, Lunsy et al. (2018) noted a significant decrease in specifically the mothers' levels of stress and depression, as well as substantial improvements in physical health that were all maintained at follow-up.~~ Fung et al. (2018) examined ACT interventions or therapeutic processes and their impact on helping parents of children with ASD manage their stress. The study focused on the population of mothers. The study was conducted among 33 mothers of children with ASD, wherein the authors assessed changes in ACT process measures (psychological flexibility, cognitive fusion, values). Fung et al. (2018) evaluated these factors in three months and found that mothers reported positive and significant improvement post-intervention in ~~all fo the ACT process measures, psychological flexibility, cognitive fusion, and value-consistent activities.~~ The positive results were seen across various life domains of the mothers, including parenting, relationships, and self-care. ~~As such, these findings could underscore the effectiveness of ACT as an intervention in supporting mothers of children with ASD, mitigating risks of stress and depression.~~ This body of knowledge could provide valuable information regarding the effectiveness of ACT as interventions to support parents of children with ASD, ~~which proves to be effective in enhancing ACT factor levels such as psychological flexibility and cognitive fusion values~~ (Fung et al., 2018).

According to Gould et al. (2018), ACT is "a contemporary behavioral approach to increasing adaptive, flexible repertoires of behavior, by reducing control by problematic rule-deriving and rule-following" (p. 81). ~~Similar to Lunsy et al. (2018) and Fung et al. (2018),~~ Gould et al. (2018) found support for the effectiveness of ACT intervention in alleviating the stress of parents of children with ASD. The authors ~~of the study~~ noted that

exposure to ACT showed significant increases in values-directed behaviors, including self-compassion among parents of children with ASD. The positive impact of ACT was also sustained throughout and for more than six months after exposure to ACT training. Furthermore, exposure to ACT results in significant decreases in parental experiential avoidance among parents of children with ASD (Gould et al., 2018).

Joeke et al. (2016) concurred as the authors explored the impact of ACT in supporting parents of children with high-functioning autism. The authors of the study noted how ACT is a method in psychotherapy that aids parents in processing difficult thoughts and feelings faced. Throughout an eight-week ACT intervention, the study examined 24 mothers of children with high functioning autism and their experiences in ACT. The results of the study revealed that mothers who received ACT had significantly lower scores in depression, stress, and anxiety (Joeke et al., 2016). This body of knowledge provides empirical evidence regarding the positive outcomes linked to ACT interventions, especially when dealing with psychological distress related to the care of children with autism or ASD (Gould et al., 2018; Joeke et al., 2016).

Other ~~studies addressed the same issue. authors such as Hahs et al. (2019) and Poddar et al. (2017) added to the findings mentioned above. (2016).~~ Hahs et al. (2019) conducted a randomized controlled trial of a brief ACT intervention for parents of individuals diagnosed with ASD. ~~The e~~Further results of the examination analysis revealed that parents of children with ASD benefitted from an ACT intervention, ~~and—It was also found~~ that the brief version of ACT required fewer resources to be effective (Hahs et al., 2019). Lamb's (2018) ~~study examined this topic further,~~ exploring the impact of a two-session ACT training for parents of adolescents and young adults with ASD. Specifically, the study evaluated a brief ACT training in comparison with a traditional parent support group, consisting of two, two-hour sessions. The ~~results of the~~

study showed that acceptance levels among participants of the study significantly improved after the ACT training. ~~These underscore further the positive impact of ACT interventions in decreasing stress levels and increasing acceptance levels among parents of children with ASD.~~ This body of knowledge could provide empirical information regarding the use of ACT as a strategy to decrease parental stress and psychological difficulties linked to caring for children with ASD (Gould et al., 2018; Hahs et al., 2019; Lunsky et al., 2018; Raches et al., 2018).

According to Poddar et al. (2017), ACT ~~is~~ a therapy that “focuses on accepting things that are beyond control and on the commitment to possibly changeable aspects by increasing the psychological flexibility of the person, thereby aiding to better realistic adjustments” (p. 555614). Poddar et al. (2017) ~~added to the findings of Gould et al. (2018) and Hahs et al. (2019),~~ examining the impact of ACT on valuing behavior of parents of children with neurodevelopmental disorders such as ASD. ~~As such, Poddar et al. (2017) not~~ing the effectiveness of ACT for parents of children with ASD. The study; employing five parents of children with neurodevelopmental disorders receiving ~~intervention in~~ a six-week ACT ~~intervention~~, the findings of the study ~~showed~~ revealing that ACT is an effective intervention that significantly increases parents’ values and psychological flexibility. The results of these studies are consistent with the principles of ACT, underscoring the need for more ACT treatments for ASD families ~~s for parents who face significant challenges by the developmental deficits of their children with ASD.~~ This could also add more information regarding factors that impact ACT interventions to be effective, such as the number of resources (Hahs et al., 2019; Poddar et al., 2017). ~~Therapists could use this pool of reference in developing interventions to support parents of children with ASD effectively.~~

~~As indicated by Lunsky et al. (2018), mothers of children with ASD are faced with more difficulties in terms of psychological distress. In line with this, Ahmadi (2019) and Heidarian et al. (2017) focused on ACT interventions for mothers of children diagnosed with ASD. For example, the authors examined the effectiveness of ACT acceptance and commitment therapy in improving the level of self-efficacy of mothers of children diagnosed with ASD. The results of the analysis revealed that ACT intervention effectively increased was effective, as demonstrated in the increase in the self-efficacy of mothers of children with ASD. Self-efficacy was measured as a single construct and its components such as “responsibility, self-management, accepting the child as an individual, and positive evaluation about the child” (Ahmadi, 2019, p. 123). The researchers of the study concluded that ACT could be helpful to mothers of children ASD who are undergoing difficulties with their current situation. Heidarian et al. (2017) conducted a similar study to explore the effectiveness of group-based ACT intervention in the mindfulness and acceptance of mothers of children with ASD. The results of the analysis revealed a significant improvement in the selected criteria, that there was a significant difference in the mindfulness of mothers in the control and experimental groups. and thus, the researchers concluded that group-based ACT interventions could be effective in improving the ability of mothers to be psychologically more prepared in handling the needs of their children with ASD. This body of literature could highlight the use of ACT interventions as ways to enhance well-being outcomes among parents of children with ASD, especially mothers, who are more vulnerable to psychological distress (Ahmadi, 2019; Heidarian et al., 2017; Lunsky et al., 2018).~~

~~ACT interventions have been found to increase self-compassion scores among parents of children with ASD (Zody, 2017). According to Zody (2017), ACT interventions such as one-day workshops could be beneficial in promoting acceptance of~~

~~unwanted thoughts, feelings, and emotions experienced by parents of children with ASD. Zody (2017) conducted a study further on this topic, employing 20 parents of children with ASD. The author conducted a one-day workshop centered on ACT practices and principles. The findings of the study showed that after the ACT program, parents reported higher scores in self-compassion and acceptance. However, parental stress levels and maladaptive coping scores did not decrease significantly, which is contrary to findings of other studies by Gould et al. (2018), Hahs et al. (2019), and Lunsky et al. (2018). Whittingham et al. (2019) added that processes of change had been less thoroughly explored regarding ACT interventions for parents of children with ASD. These processes of change concerning ACT interventions include parenting style, parental attitude to child emotion, and parental psychological flexibility (depressive symptoms). This underscores the need to explore further the effectiveness of ACT interventions in addressing the problems and risks of psychological distress among parents of children with ASD.~~

### **Integration of Interventions for ASD**

Integrating ABA training with other interventions has been proposed to empower parents with their ability to help their children with ASD. ~~Several authors noted the need to examine further integrating interventions for parents of children with ASD (Raches et al., 2018; Vivanti, 2017).~~ According to Raches et al. (2018), integrating ABA with other interventions can effectively empower parents with their ability to help their children with ASD, acquiring, and developing functional skills. The study ~~noted further) explored this topic, noting~~ how children's development is highly dependent on adults and positive adult relationships, ~~underscoring. Raches et al. (2018) thus underscored~~ the need for effective interventions for parents of children with ASD, integrating the ~~Applied Behavior Analysis (ABA)~~ informed Early Start Denver Model (ESDM) and Infant/Early



Childhood Mental Health (I/ECMH). ~~The authors of the study underscored the integration of both therapies for parents of children with ASD.~~ As such, both therapies can be combined or utilized simultaneously within the context of an interdisciplinary team in the treatment of the child with ASD and his/her relationships, as well as the child's parents or caregivers (Raches et al., 2018). Vivanti (2017) ~~added to this,~~ examining ed individual and combination interventions for ASD based on theory-driven research. noting ~~—Vivanti argued that research examination of combination treatment approaches should be viewed from the framework of “logical coherence, falsifiability, parsimony, and consilience” (p. 114). With regards to this topic, Vivanti (2017) noted~~ that current research on ASD interventions that combine different treatment approaches is limited. This body of literature underscores the need for more exploration regarding the integration of interventions for those caring for individuals diagnosed with ASD. More research is needed regarding the topic of innovative strategies and more effective interventions within the ASD field.

Effective management of ASD requires complex and integrated interventions, especially for those caring for individuals diagnosed with ASD. Robles et al. (2019) ~~added and further~~ underscored how professionals, families, and patients face difficulties when choosing options and interventions for ASD. Furthermore, patients and parents of patients with ASD are often not present with evidence that shows the effectiveness and efficacy of these interventions. Cachia et al. (2016) added to these findings, examining mindfulness, stress, and well-being of parents of children with ASD. underscoring ~~—The study underscored~~ how parents of children with ASD often face lowered quality of life, heightened stress levels, depression, and anxiety due to the ongoing nature of care. The authors of the study conducted a mindfulness-based intervention among parents of children with ASD, wherein the findings showed positive results after the intervention.

~~That is, the parents reported significantly lower levels of stress and better psychological well-being, as well as enhancing their child's behavioral problems.~~ This body of findings presents alternative methods and interventions for parents of children with ASD, such as mindfulness-based interventions. This could be used as an initial reference in developing programs and interventions that integrate intervention methods within the ASD field (Cachia et al., 2016; Robles et al., 2019). ~~Additionally, this calls out the need for more exploration regarding the topic and merits the need for the current study.~~

~~Several interventions have been developed to aid parents of children with ASD.~~ Scholars have underscored the need to provide effective behavioral assessments and interventions for parents of children with ASD and other developmental disabilities (~~Booth et al., 2018; Colebourn et al., 2017; Marleau et al., 2019~~). ~~Marleau et al. (2019) explored this topic further.~~ Marleau et al. (2019) examined ~~ing~~ interactive web training to teach parents to select function-based interventions for challenging behavior. The ~~researchers~~ authors of the study employed 26 parents of children with a developmental disability wherein the participants were tasked to complete interactive web training (IWT) to teach behavioral function identification and intervention selection. The results findings of the study revealed that parents were more accurate in the identification of behavioral function and selected more adequate interventions following IWT, indicating the its effectiveness of the training intervention.

Further results indicated that parents spent less than two and a half hours to complete the IWT, and overall had positive ratings regarding the intervention (Marleau et al., 2019). ~~Booth et al. (2018) similarly underscored these findings, noting how interventions and packages with behavioral underpinnings are more useful for parents of children with autism. Booth et al. (2018) proposed the use of integrating various methods to train and educate parents of children with ASD. These methods and interventions~~

~~include the use of behavioral skills training, video modeling, and manualized training packages). Parents of children with ASD need to be effectively trained to teach new skills across a variety of different domains. This body of findings underscores the need to further explore and develop effective interventions for parents of children with ASD, as well as the importance of educating parents of children with ASD using evidence-based practice to help effectively educate the children (Booth et al., 2018; Marleau et al., 2019).~~

Integrating parent and child-focused interventions is an essential focus within the ASD field. ~~Several authors have underscored the importance of addressing the needs of parents of children with ASD (Noblejas et al., 2016; Pickard & Ingersoll, 2017). For example,~~ Pickard and Ingersoll (2017) proposed a family-focused service delivery model, recommending the use of the Double ABCX Model of Stress and Adaptation to address the needs of families with children diagnosed with ASD. highlighting the model's effectiveness in integrating ASD interventions. ~~The authors of the study highlighted how the Double ABCX model is an effective strategy to integrate child and parent-focused interventions within the ASD field.~~ Noblejas et al. (2016) noted similarly, underscoring how families with children with ASD could be supported using a double ABCX model. ~~The authors of the study noted,~~ in a dual ABCX model, A stands for stressors, B for coping strategies and support, C for the appraisal of the situation, and X for the potential adaptive behavior of parents. The findings gathered responses from parents of children with ASD (54 mothers and 35 fathers) wherein the results indicated varying degrees of depression among 58% of mothers and 67% of fathers. The authors concluded that cognitive definition of stressors and meaning in life experience needs to be integrated into support programs for ASD families ~~families with children with ASD~~. This pool of findings introduces the model of a double ABCX in the assessment and

development of strategies for effective coping for parents of children with ASD.

Employing a dual ABCX model, along with other intervention models such as ABA or ACT, could result in positive outcomes in addressing the specific psychological and mental needs of parents of children with ASD (Noblejas et al., 2016; Pickard & Ingersoll, 2017).

Aside from child-focused interventions, parent-focused interventions are also crucial within the ASD field. ~~Several authors noted the importance of parent-focused interventions in improving parent well-being outcomes (Leadbitter et al., 2018; Rutherford et al. 2019; Zhou et al. 2019).~~ Rutherford et al. (2019) explored this topic further by conducting a systematic review with meta-analysis, ~~which revealed. Through their meta-analysis, the authors of the study found~~ that interventions for ASD were mostly parent education and training, mindfulness or relaxation training, parent support groups, and multicomponent interventions. ~~Positive w~~Well-being outcomes were also found ~~through these interventions; the positive outcomes includ~~ing increases in quality of life, parent stress, self-efficacy, parenting style, and satisfaction (Rutherford et al., 2019).

Furthermore, the author found significant results for reducing parent ~~stress via stress through via a the use of~~ mindfulness training approach. Mindfulness-based training was substantial in improving parent style and satisfaction and parent education (Rutherford et al., 2019). Leadbitter et al. (2018) found similar results ~~ss in their study,~~ as the authors administered autism family experience questionnaires among ~~relevant parents~~ parents of children with ASD. The authors of the researchers surveyed the parents of children enrolled in the Pre-school Autism Communication Trial and its 6-year follow-up study. ~~Similar to Rutherford et al.'s (2019) findings,~~ Leadbitter et al. (2018) found that interventions such as parent education and training enhance levels of child adaptive

functioning, parental mental health, and parental well-being. These findings underscore the importance of converging various intervention approaches, which could result in optimal measures of parental well-being (Leadbitter et al., 2018; Rutherford et al., 2019).

~~Furthermore, this body of findings outlines the available intervention approaches and methods for parents of children with ASD.~~ The application of these interventions could result in positive well-being outcomes and improved psychological levels among this population. This is vital to address given that parents of children with ASD have lower levels of parenting self-efficacy and more emotional challenges than parents of children with no developmental disabilities (Zhou et al., 2019).

There are some integrated approaches related to the care of children with ASD. Several authors outlined how parents integrate complementary and alternative medical (CAM) treatments for ASD with traditional care (Feldman, 2016; Klein & Kemper, 2016). Klein and Kemper (2016) examined and categorized treatment modalities into four categories: recommended, monitored, tolerated, and therapies that should be avoided. The authors ~~of the study~~ noted that overall, the most promising therapies recommended are ABA applied behavior analysis, parent-implemented training, melatonin supplements to improve sleep, supplements to correct deficiencies, and music therapy ~~(Klein & Kemper, 2016)~~. Additionally, interventions linked to diet and medications may also be helpful, but requires careful attention (Klein & Kemper, 2016). Feldman (2016) added that ~~every child with ASD needs to be treated as an individual with specific needs. Thus,~~ commonly recommended treatments may not work for every child with ASD. More efforts to develop and innovate treatment and interventions are needed over time, with consideration for the gradual alteration of the effect of developmental changes, ~~which alters over time~~. The re-evaluation of such interventions

is crucial for both the parents of children with ASD and children with ASD themselves (Feldman, 2016; Klein & Kemper, 2016).

One possible integrated intervention for ASD is combining ABA with cognitive-affective strategies such as ACT. Raches et al. (2018) and Pennefather et al. (2018) noted ~~this in their studies, stating~~ how interventions with ABA with ACT could improve the psychological flexibility of individuals, ~~such as parents of children with ASD,~~ to improve their behaviors concerning commitment. Pennefather et al. (2018) ~~evaluated further~~ ~~examined this topic, evaluating~~ an online training program to enhance family routines, parental well-being, and the behavior of children with autism, with the use of ABA and ACT. The authors ~~reported that of the study reported,~~ parents caring for their children with ASD have high rates of stress that may interfere with ABA intervention implementation—as such, integrating ACT strategies could aid in increasing the cognitive-affective skills of parents. The study ~~delved into this topic further by~~ ~~employing~~ 23 parents of children with ASD. The participants ~~engaged~~ ~~participated~~ in a three-week online training program. They were regularly exposed ~~to with~~ instructions in ABA principles ~~and as well as~~ stress reduction strategies and mediation practice based on ACT principles ~~(Pennefather et al., 2018)~~. After the weekly intervention meetings, the ~~results showed that~~ parents reported significant decreases in parental stress, increases in relevant knowledge regarding ASD, improvements in child prosocial behavior, a decrease in hyperactive behaviors, and high levels of satisfaction with the intervention. ~~These is~~ ~~body of~~ findings could provide ~~the basis of a study~~ ~~initial findings~~ regarding the effectiveness of combining ACT and ABA principles to develop interventions for parents of children with ASD (Pennefather et al., 2018; Raches et al., 2018).

### Summary

~~Many~~A significant number of researchers have addressed the experienced difficulties and stress among parents of ~~ASD children~~children with ASD; however, few put direct emphasis on the effectiveness of ACT in enhancing the perceived involvement of parents in assisting their children with ASD when used in combination with ABA (Antill, 2019; Shepherd et al., 2018b; Shepherd et al., 2018c). A few studies have touched on the effectiveness of combining these intervention strategies or combining types of alternative medical care ~~in general~~, but they did not ~~explicitly focus on~~go into great detail ~~regarding~~ the specific benefits of ACT and ABA as a combined treatment option (Feldman, 2016; Klein & Kemper, 2016). ~~However,~~But while these studies are few, the research they provided still proves that great potential lies within the combination of these two elements. That said, ~~the conclusion is that~~ more research still needs to be conducted as to the effectiveness of ABA and ACT combination therapy for children with ASD (Noblejas et al., 2016; Pickard & Ingersoll, 2017). This study will utilize ~~RFT~~Relational Frame Theory to accurately gauge the effectiveness of combined therapy in increasing perceived parental involvement of parents with children with ASD

### Conclusions

~~Corti et al. (2018) and Jahangiri (2019) conducted studies on ACT, primarily focused on the psychological functioning of parents who have children with ASD.~~ Raches et al. (2018) noted that ABA, coupled with other interventions, could empower parents with their ability to help their children with ASD, acquire and develop functional skills. Therefore, using the framework of Hayes' (1993) RFT of ACT as a point of reference, psychologists, psychiatrists, and therapists can better understand the needs of the parents of children with ASD ~~and methods for supporting parents of children with ASD~~ (Bell & Harris, 2017). Finally, psychologists, psychiatrists, and therapists should

consider emphasizing the possible benefits of integrating ACT with ABA to enhance the involvement of parents ~~of ASD children whose children have been diagnosed with ASD~~ and undergoing interventions from behavior therapists. This could ultimately increase perceived parental involvement of parents in assisting their children with ASD when used ~~in combination~~ with ABA, as well as how parents of children with ASD could be better supported (Bell & Harris, 2017).

Across the literature, the researcher found that integrating ABA training with other interventions has been proposed to empower parents with the ability to help their children with ASD acquire and develop the necessary functional skills to be successful at home and school (Raches et al., 2018). However, previous researchers have primarily focused on the psychological functioning of parents who have children with ASD (Corti et al., 2018; Jahangiri, 2019). While this information provides the baseline for this study, the lack of focus on ~~enhancing the effectiveness of interventions through~~ the integration of various methods for helping parents of children with ASD is a knowledge gap. As Corti et al. (2018) ~~and Jahangiri (2019)~~ indicated, there is a gap in the professional literature regarding the effectiveness of ACT in enhancing the perceived involvement of parents in assisting their children with ASD when used ~~with in combination with~~ ABA. To examine the effectiveness of ABA as an intervention for children with ASD, Grigorenko, et al. (2018) examined the impact of ABA on enhancing children's skills and developmental processes, ~~noting. The authors noted~~ how ABA is effective in helping children with ASD acquire and develop functional skills (Grigorenko et al., 2018). However, many parents continue to be inexperienced with its application (Grigorenko et al., 2018; Raches et al., 2018). This is vital to address given that ABA, ~~along with other intervention approaches~~, could lead to increased engagement among parents of children



with ASD in helping their children acquire and develop functional skills (Raches et al., 2018).

Previous researchers have not ~~focused on directed attention to~~ integrating specific interventions to meet the needs of parents of children with ASD in coping with parental stress, psychological difficulties, and marital struggles and dissatisfaction (Feldman, 2016; Raches et al., 2018). Most of the current literature on integrated approaches linked to ASD are geared towards children with autism, rather than the parents ~~or caregivers~~ themselves (Feldman, 2016; Klein & Kemper, 2016). This is vital ~~since to address given that~~ parents' well-being is crucial to the optimal development of their children (Pennefather et al., 2018; Rutherford et al., 2019). As a result, Hayes' (1993) RFT of ACT remains largely unexplored among this population, creating a significant gap in knowledge, given that Hayes' (1993) RFT of ACT relates to the connection of functional contextualism, communication through their interaction with the environment, and behaviors and communication patterns in line ACT as a therapeutic approach (Lamar et al., 2014). Empirical knowledge is not prevalent regarding the integration of intervention methods relevant to the population of parents of children with ASD (Bell & Harris, 2017; Vahey et al., 2017).

The objective of this quantitative research study is to address this gap in the literature by examining if exposure to both ABA and ACT demonstrated higher perceived parental involvement among parents of children with ASD compared to ~~those who were only exposed to ABA alone from the behavior therapists. Bell and Harris (2017) and Vahey et al. (2017) reviewed current research regarding the RFT as it relates to therapeutic interventions; similarly,~~ Howell (2019) examined the effectiveness of ACT-based exercises on positive interactions and responses to challenging behaviors among therapists serving children with ASD, as it is consistent with RFT principles. Raftery-

Helmer, Moore, Coyne, and Reed (2016) further noted that RFT of ACT holds substantial promise as a treatment intervention model that improves problematic parent-child interactions, as well as parenting behavior in the development and maintenance of children with ASD. ~~However, a more~~ ~~Despite these studies and findings, however, a~~ ~~more~~ in-depth understanding is needed regarding the impact of both ABA and ACT among parents of children with ASD (Howell, 2019; Raftery-Helmer et al., 2016). A better understanding of how to meet the needs of parents of children with ASD is vital, given that parents of children with ASD have reported increased levels of stress and low levels of support and information (Antill, 2019; Grigorenko et al., 2018; Shepherd et al., 2018c). Leaving these issues unaddressed could lead to poor development outcomes for children with ASD. This calls out the need for more interventions for engagement, support, and participation (Antill, 2019; Grigorenko et al., 2018). ~~Accordingly, it~~ is essential to develop and implement integrated intervention programs that aim to enhance parent knowledge and guidance in the field of ASD (Stanislaw et al., 2019). Leaving the needs of parents, unaddressed leads to ~~low and~~ inconsistent engagement of parents in the interventions intended for children with ASD (Antill, 2019; Shepherd et al., 2018c).

The integration of various interventions and approaches could lead to better outcomes for parents of children with ASD. Researchers have called out the need for more exploration regarding types of approaches that would best complement one another (Raches et al., 2018). Feldman (2016) noted how parents integrate complementary and alternative medical methods with traditional care approaches, leading to better outcomes than traditional methods alone. Similarly, Klein and Kemper (2016) indicated that more efforts are needed to develop and innovate treatment and interventions for parents of children with ASD, improving overall well-being outcomes. ~~In line with RFT of ACT,~~ the reassessment of such interventions is crucial for both the parents of children with

ASD and the children with ASD themselves (Feldman, 2016; Klein & Kemper, 2016; Pennefather et al., 2018; Raches et al., 2018).

~~Yi et al. (2019) noted that parents report being confused and frustrated throughout ASD interventions and services. As such, several researchers have called for the development of interventions aimed at enhancing interventions, specifically for parents of children with ASD (Shepherd et al., 2018a; Yi et al., 2019). Researchers have proposed that ABA interventions are effective in enhancing outcomes among families of children with ASD (Callahan et al., 2019; Makrygianni et al., 2018). Also, Callahan et al. (2019) found strong support for the use of ABA as an intervention for children with ASD, noting that parents prefer behavioral artistry (BA) descriptors for ABA therapists compared to non-BA descriptors. Overall, ABA interventions can effectively improve the quality of life of parents of children with ASD in terms of parents' stress levels and improving engagement (Cassell, 2019).~~

Hajhashemi et al. (2016) ~~concurred with this assessment,~~ examining parental stress, affective symptoms, and marital satisfaction in parents of children with ASD. ~~Several researchers have delved into this phenomenon in relation to the population of parents of children with ASD, focusing on ABA interventions and its impact on the population of parents of children with ASD (Cassell, 2019; Hajhashemi et al., 2016). The authors Hajhashemi et al. (2016) The authors~~ found that higher levels of involvement in ABA interventions could significantly decrease parental stress. ~~Not only is ABA effective in reducing stress levels, but it can also have a positive impact on the family unit, improving overall marital satisfaction (Hajhashemi et al., 2016).~~ Therefore, intervention programs such as ABA can increase parental knowledge in line with ASD care, which also improves parents' ABA therapeutic skills (Deene et al., 2017; Kohli & Kohli, 2016). ~~As such,~~ this pool of studies provides ~~a wide body of~~ literature on the

strategies and interventions aimed at supporting parents and developing the required skills in caring for their children with ASD (Blackman, 2017; Deene et al., 2017; Duffney, 2019; Kohli & Kohli, 2016).

~~According to Gould et al. (2018), ACT is "a contemporary behavioral approach to increasing adaptive, flexible repertoires of behavior, by reducing control by problematic rule deriving and rule following" (p. 81). As such, ACT interventions are also significant in helping parents of children with ASD (Gould et al., 2018).~~ Fung et al. (2018) underscored the role of ACT interventions or therapeutic processes and their impact on helping parents of children with ASD manage their stress, while Lunskey et al. (2018) noted significant decreases in the mothers' levels of stress and depression, as well as significant improvements in physical health after ACT intervention programs. The positive impact of ACT can ~~also~~ be sustained ~~throughout and~~ for more than six months after exposure to ACT training, according to several authors (Gould et al., 2018; Lunskey et al., 2018). ~~These~~ ~~is~~ ~~body~~ ~~of~~ findings could provide empirical information regarding the use of ACT as a strategy to decrease parental stress and psychological difficulties linked to caring for children with ASD (Gould et al., 2018; Hahs et al., 2019; Lunskey et al., 2018; Raches et al., 2018).

Research centered on integrated interventions to meet the needs of parents of children with ASD is extremely limited (Raches et al., 2018; Vivanti, 2017). There are limited existing empirical studies ~~, either quantitative or qualitative,~~ in which researchers examined the combination of ACT and ABA as strategies to aid parents of children with ASD ~~(Raches et al., 2018; Vivanti, 2017)~~. In general, previous researchers examining ASD interventions have focused on interventions for the children with ASD, rather than focusing on the parents of the children with ASD (Robles et al., 2019; Vivanti, 2017). This is vital to address given that the developmental process of children with autism is

highly dependent on the well-being and coping abilities of their parents (Cachia et al., 2016; Factor, Ollendick, Cooper, Dunsmore, Rea, & Scarpa, 2019; Vivanti, 2017). ~~In fact, parents are central to the delivery of ASD interventions, especially those supported by ABA therapists (Paseo, 2018).~~

The gap in the literature is the ~~seeming~~ lack of research about ~~not only~~ the challenges faced by parents of children with ASD ~~and~~ ~~but also~~ the intricacies and specific challenges involved in addressing the need of parents of children with ASD and alternative methods to aid this population (Alves & Maich, 2019; Walz, Wang, & Bianchini, 2019). Past researchers have primarily focused on helping the children with ASD ~~instead of the parents themselves, but not on their parents or caregivers~~ who are instrumental in ~~their~~ ~~the children's~~ development growth (Booth et al., 2018; Colebourn et al., 2017; Marleau et al., 2019).

Existing empirical studies are also lacking regarding the use of integrated methods of ACT and ABA in supporting parents of children with ASD, as well as addressing their needs (Colebourn et al., 2017; Marleau et al., 2019). Pennefather et al. (2018) and Raches et al. (2018) suggested the need for more rigorous examination of ways/mechanisms to support and address the needs of parents of children with ASD, especially in terms of increasing involvement and engagement in the care of their children with ASD (~~Antill, 2019; Grigorenko et al., 2018; Shepherd et al., 2018c~~). ~~In particular, there is a call for a more rigorous examination of integrated strategies and interventions aimed towards meeting the needs of parents of children with ASD, providing them pertinent information regarding coping strategies related to the care of ASD and stress in relation to it (Mostafa, 2019).~~ Furthermore, Stanislaw et al. (2019) and Antill (2019) found only limited literature on exploring integrated ASD interventions to enhance the participation and the engagement of parents and their role in impacting their

children's developmental outcomes. ~~In light of these findings, Ff~~ Future researchers should delve further into this phenomenon and examine it according to the needs and challenges explicitly faced by parents of children with ASD (Antill, 2019; Corti et al., 2018; Jahangiri, 2019).

~~Understanding the needs of the parents of children with ASD and methods for supporting parents of children with ASD are crucial to address (Bell & Harris, 2017, 2017).~~ Among the implications of past researchers are that parents of children with ASD, psychologists, psychiatrists, and therapists should together strive to develop innovative strategies where the effective management of ASD and knowledge regarding ASD are promoted (Cachia et al., 2016; Robles et al., 2019). Robles et al. (2019) added that effective management of ASD requires complex and integrated interventions, especially for those caring for individuals diagnosed with ASD. ~~That is,~~ traditional methods integrated with other approaches such as ACT could result in optimal outcomes in mindfulness, stress, and well-being of parents of children with ASD (Cachia et al., 2016).

More examination and development of integrated, alternative methods and interventions for parents of children with ASD, ~~such as mindfulness-based interventions, ACT, and ABA methods,~~ could result ~~in lowerto-lower~~ levels of parental stress, and better psychological well-being, ~~as well as enhancing their child's behavioral problems~~ (Cachia et al., 2016; Vivanti, 2017; Robles et al., 2019; Vivanti, 2017). As such, the findings from this study could provide ~~some~~ empirical evidence about the ~~possible~~ benefit of integrating ACT with ABA to enhance the parental involvement ~~withof parents~~ ~~whose~~ children ~~who~~ have been diagnosed with ASD and ~~are~~ undergoing interventions from behavior therapists (Antill, 2019; Bell & Harris, 2017).

Chapter 3 includes a discussion of this quantitative research study and systematic steps to address the research question on the topic of ACT and its effectiveness in

enhancing the perceived parental involvement of parents in assisting their children with ASD when used in combination with ABA. Also, the next chapter is an outline of the research design, which coincides with the purpose of the study, the research population, and the sampling method. Chapter 3 includes an in-depth discussion of the methodology for collecting the data and setting.

## **References**

- Ahmadi, A. (2019). Effectiveness of acceptance and commitment therapy in improving self-efficacy of mothers of children with autism. *Quarterly Journal of Family and Research, 16*(2), 123-137.
- Alves, K. E., & Maich, K. A. (2019). A parent's perspective is worth a thousand words: Parents of children with ASD and their perspectives on a community-based parent education program. *Canadian Journal for New Scholars in Education/Revue canadienne des jeunes chercheuses et chercheurs en éducation, 10*(1). Retrieved from: [www.cdm.ucalgary.ca/index.php/cjnse/article/view/43470/](http://www.cdm.ucalgary.ca/index.php/cjnse/article/view/43470/)
- Antill, K. (2019). Family-centered applied behavior analysis for children with autism spectrum disorder. *Intervention in School and Clinic, 1053451219842240*.
- Bagaiolo, L. F., Mari, J. D. J., Bordini, D., Ribeiro, T. C., Martone, M. C. C., Caetano, S. C., ... & Paula, C. S. (2017). Procedures and compliance of a video modeling applied behavior analysis intervention for Brazilian parents of children with autism spectrum disorders. *Autism, 21*(5), 603-610.  
doi:10.1177/1362361316677718.
- Bell, N. K., & Harris, S. (2017). ACT & RFT in relationships: Helping clients deepen intimacy and maintain healthy commitments using acceptance and commitment therapy and Relational Frame Theory. *Journal of Marital and Family Therapy, 43*(1), 176-177. Retrieved from: [www.search.proquest.com/openview/a1fcf7231dc44fa9915052124641657a/1?pq-origsite=gscholar&cbl=47664/](http://www.search.proquest.com/openview/a1fcf7231dc44fa9915052124641657a/1?pq-origsite=gscholar&cbl=47664/)



- Blackman, A. L. (2017). *A comparison between online and in-vivo parent training on parental acquisition of skills to promote appropriate behaviors in children diagnosed with autism spectrum disorder* (Master's thesis). Florida Institute of Technology. Retrieved from: <https://repository.lib.fit.edu/handle/11141/1453>
- Booth, N., Gallagher, S., & Keenan, M. (2018). Autism, interventions and parent training. *Psichologija/Psychology*, 57. Retrieved from: <https://web.a.ebscohost.com/abstract?direct=true&profile=ehost&scope=site&authtype=crawler&jrnl=13920359&AN=132125039&h=A3hC7lZokQKT2QTtikmqetTcFMizl7uKFbwqae9dJeo49U1GV8lUTvNyo38WYofDI5%2bZhc2bg9ry8PI9Or8Iw%3d%3d&crl=c&resultNs=AdminWebAuth&resultLocal=ErrCrlNotAuth&crlhashurl=login.aspx%3fdirect%3dtrue%26profile%3dehost%26scope%3dsite%26authtype%3dcrawler%26jrnl%3d13920359%26AN%3d132125039>
- Buzhardt, J., Rusinko, L., Heitzman-Powell, L., Trevino-Maack, S., & McGrath, A. (2016). Exploratory evaluation and initial adaptation of a parent training program for Hispanic families of children with autism. *Family Process*, 55(1), 107-122. doi:10.1111/famp.12146.
- Cachia, R. L., Anderson, A., & Moore, D. W. (2016). Mindfulness, stress and well-being in parents of children with autism spectrum disorder: A systematic review. *Journal of Child and Family Studies*, 25(1), 1-14. doi:10.1007/s10826-015-0193-8.
- Callahan, K., Foxx, R. M., Swierczynski, A., Aerts, X., Mehta, S., McComb, M. E., ... & Sharma, R. (2019). Behavioral artistry: Examining the relationship between the

interpersonal skills and effective practice repertoires of applied behavior analysis practitioners. *Journal of Autism and Developmental Disorders*, 1-14.

doi:10.1007/s10803-019-04082-1.

Cassell, M. K. (2019). *Predictors of stress in parents of children receiving applied behavior analysis for autism spectrum disorder* (Doctoral dissertation). The Ohio State University. Retrieved from: [https://etd.ohiolink.edu/pg\\_10?0::NO:10:P10\\_ACCESSION\\_NUM:osu1555016992247626](https://etd.ohiolink.edu/pg_10?0::NO:10:P10_ACCESSION_NUM:osu1555016992247626)

Colebourn, J. A., Golub-Victor, A. C., & Paez, A. (2017). Developing overhand throwing skills for a child with autism with a collaborative approach in school-based therapy. *Pediatric Physical Therapy*, 29(3), 262-269.

doi:10.1097/PEP.0000000000000405.

Corti, C., Pergolizzi, F., Vanzin, L., Cargasacchi, G., Villa, L., Pozzi, M., & Molteni, M. (2018). Acceptance and commitment therapy-oriented parent-training for parents of children with autism. *Journal of Child and Family Studies*, 27(9), 2887-2900.

doi:10.1007/s10826-018-1123-3.

Dai, Y. G., Brennan, L., Como, A., Hughes-Lika, J., Dumont-Mathieu, T., Carcani-Rathwell, I., ... & Fein, D. A. (2018). A video parent-training program for families of children with autism spectrum disorder in Albania. *Research in Autism Spectrum Disorders*, 56, 36-49. doi:10.1016/j.rasd.2018.08.008.

- Denne, L. D., Hastings, R. P., & Hughes, J. C. (2017). UK parents' beliefs about applied behavior analysis as an approach to autism education. *European Journal of Special Needs Education, 32*(4), 543-555. doi:10.1080/08856257.2017.1297568.
- Dieleman, L. M., Moyson, T., De Pauw, S. S., Prinzie, P., & Soenens, B. (2018). Parents' need-related experiences and behaviors when raising a child with autism spectrum disorder. *Journal of Pediatric Nursing, 42*, 26-37.  
doi:10.1016/j.pedn.2018.06.005.
- Duffney, K. (2019). *Effects of online ABA training on stress levels of parents with a child with autism* (Doctoral dissertation). University of North Florida. Retrieved from: <https://digitalcommons.unf.edu/etd/887/>
- Estes, A., Swain, D. M., & MacDuffie, K. E. (2019). The effects of early autism intervention on parents and family adaptive functioning. *Pediatric Medicine (Hong Kong, China), 2*, 21. Retrieved from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6776235/>
- Factor, R. S., Ollendick, T. H., Cooper, L. D., Dunsmore, J. C., Rea, H. M., & Scarpa, A. (2019). All in the family: A systematic review of the effect of caregiver-administered autism spectrum disorder interventions on family functioning and relationships. *Clinical Child and Family Psychology Review, 22*(4), 433-457.  
doi:10.1007/s10567-019-00297-x.
- Feldman, E. (2016). Integrative approaches to caring for children with autism. *Integrative Medicine Alert, 19*(7). Retrieved from:

<https://search.proquest.com/openview/735a674ea10ae4c8423aba27c914c221/1?pq-origsite=gscholar&cbl=196259>

- Fenning, R. M., & Butter, E. M. (2019). Promoting parent engagement in parent training for children with autism spectrum disorder. In C. R. Johnson, E. M. Butter, & L. Scahill (Eds.), *Parent training for autism spectrum disorder: Improving the quality of life for children and their families* (p. 61–84). American Psychological Association. <https://doi.org/10.1037/0000111-004>
- Fung, K., Lake, J., Steel, L., Bryce, K., & Lunsy, Y. (2018). ACT processes in group intervention for mothers of children with autism spectrum disorder. *Journal of Autism and Developmental Disorders, 48*(8), 2740-2747. doi:10.1007/s10803-018-3525-x.
- Ghanadzade, M., Waltz, M., & Ragi, T. (2018). The intervention priorities of parents of children with autism spectrum disorders in Iran. *Research in Autism Spectrum Disorders, 55*, 14-24. doi:10.1016/j.rasd.2018.08.002.
- Gould, E. R., Tarbox, J., & Coyne, L. (2018). Evaluating the effects of Acceptance and Commitment Training on the overt behavior of parents of children with autism. *Journal of Contextual Behavioral Science, 7*, 81-88. doi:10.1016/j.jcbs.2017.06.003.
- Grigorenko, E., Torres, S., Lebedeva, E. I., & Bondar, Y. A. (2018). Evidence-based interventions for ASD: A focus on Applied Behavior Analysis (ABA) interventions. *Psychology. Journal of Higher School of Economics, 15*(4), 711-727. doi:10.17323/1813-8918-2018-4-711-727.

- Hahs, A. D., Dixon, M. R., & Paliliunas, D. (2019). Randomized controlled trial of a brief acceptance and commitment training for parents of individuals diagnosed with autism spectrum disorders. *Journal of Contextual Behavioral Science, 12*, 154-159. doi:10.1016/j.jcbs.2018.03.002.
- Hajhashemi, K., Caltabiano, N. J., & Lovisotto, R. (2016). *Stress, affective symptoms and marital satisfaction in parents of children with autism spectrum disorder*. GRIN Verlag.
- Hartley, S. L., Papp, L. M., & Bolt, D. (2018). Spillover of marital interactions and parenting stress in families of children with autism spectrum disorder. *Journal of Clinical Child & Adolescent Psychology, 47*(sup1), S88-S99. doi:10.1080/15374416.2016.1152552.
- Hayes, S.C. (1993). Analytic goals and the varieties of scientific contextualism. In S.C. Hayes, L.J. Hayes, H.W. Reese & T.R. Sarbin (Eds.) *Varieties of scientific contextualism*. Reno, NV: Context Press (pp.11–27).
- Heidarian, A., Sajjadian, I., & Heidari, S. (2017). Effectiveness of group-base acceptance and commitment therapy on mindfulness and acceptance in mothers of children with autism spectrum disorders. *Middle Eastern Journal of Disability Studies, 7*, 28-28. Retrieved from: [www.jdisabilstud.ir/article-1-718-en.html](http://www.jdisabilstud.ir/article-1-718-en.html)
- Helton, M. R., & Alber-Morgan, S. R. (2018). Helping parents understand applied behavior analysis: Creating a parent guide in 10 steps. *Behavior Analysis in Practice, 11*(4), 496-503. doi:10.1007/s40617-018-00284-8.

Howell, J. (2019). *Examining the effectiveness of ACT-based exercises on positive interactions and responses to challenging behaviors among therapists serving children with autism spectrum disorder*. Southern Illinois University at Carbondale.

Ingersoll, B., Straiton, D., & Caquias, N. R. (2019). The Role of professional training experiences and manualized programs in ABA providers' use of parent training with children with autism. *Behavior Therapy*. doi:10.1016/j.beth.2019.09.004.

Jacobs, D., Steyaert, J., Dierickx, K., & Hens, K. (2019). Parents' views and experiences of the autism spectrum disorder diagnosis of their young child: A longitudinal interview study. *European Child & Adolescent Psychiatry*, 1-12. doi:10.1007/s00787-019-01431-4.

Jahangiri, M. M. (2019). Effectiveness of acceptance and commitment-based therapy on psychological flexibility among mothers with autistic children. *Journal of Arak University of Medical Sciences*, 21(7), 39-47. Retrieved from: [www.jams.arakmu.ac.ir/browse.php?a\\_id=5754&sid=1&slc\\_lang=en&ftxt=1](http://www.jams.arakmu.ac.ir/browse.php?a_id=5754&sid=1&slc_lang=en&ftxt=1)

Joekar, S., Farid, A. A., Birashk, B., Gharraee, B., & Mohammadian, M. (2016). Effectiveness of Acceptance and Commitment Therapy in the support of parents of children with high-functioning Autism. *International Journal of Humanities and Cultural Studies (IJHCS)*, 2(4), 2763-2772. Retrieved from: [www.ijhcs.com/index.php/ijhcs/article/view/2524](http://www.ijhcs.com/index.php/ijhcs/article/view/2524)

- Jones, S., Bremer, E., & Lloyd, M. (2017). Autism spectrum disorder: Family quality of life while waiting for intervention services. *Quality of Life Research, 26*(2), 331-342. doi:10.1007/s11136-016-1382-7.
- Kawarai, S., Symon, J. B., Hernández, A., & Fryling, M. J. (2017). Assessing preferences among behavioral interventions with Japanese parents of children with developmental disabilities. *Child & Family Behavior Therapy, 39*(3), 191-199. doi:10.1080/07317107.2017.1338450.
- Klein, N., & Kemper, K. J. (2016). Integrative approaches to caring for children with autism. *Current Problems in Pediatric and Adolescent Health Care, 46*(6), 195-201. doi:10.1016/j.cppeds.2015.12.004.
- Kohli, M., & Kohli, S. (2016, December). Electronic assessment and training curriculum based on applied behavior analysis procedures to train family members of children diagnosed with autism. In *2016 IEEE Region 10 Humanitarian Technology Conference (R10-HTC)* (pp. 1-6). IEEE.
- Lamb, M. (2018). *Evaluation of a two-session ACT training for parents of adolescents and young adults with autism spectrum disorder* (Doctoral dissertation). Southern Illinois University Carbondale. Retrieved from: <https://opensiuc.lib.siu.edu/theses/2285/>
- Leadbitter, K., Aldred, C., McConachie, H., Le Couteur, A., Kapadia, D., Charman, T., ... & PACT Consortium. (2018). The autism family experience questionnaire (AFEQ): An ecologically-valid, parent-nominated measure of family experience, quality of life and prioritised outcomes for early intervention. *Journal of Autism*

and *Developmental Disorders*, 48(4), 1052-1062. doi:10.1007/s10803-017-3350-7.

Lo, P. A. (2017). *Relationship between stress, marital satisfaction, and behavior problems of parents raising a child with autism* (Doctoral dissertation). California State University. Retrieved from: [www.scholarworks.csustan.edu/handle/011235813/1210](http://www.scholarworks.csustan.edu/handle/011235813/1210)

Lunsky, Y., Fung, K., Lake, J., Steel, L., & Bryce, K. (2018). Evaluation of acceptance and commitment therapy (ACT) for mothers of children and youth with autism spectrum disorder. *Mindfulness*, 9(4), 1110-1116. doi:10.1007/s12671-017-0846-3.

Makrygianni, M. K., Gena, A., Katoudi, S., & Galanis, P. (2018). The effectiveness of applied behavior analytic interventions for children with autism spectrum disorder: A meta-analytic study. *Research in Autism Spectrum Disorders*, 51, 18-31. doi:10.1016/j.rasd.2018.03.006.

Marleau, B., Lanovaz, M. J., Gendron, A., Higbee, T. S., & Morin, D. (2019). Using interactive web training to teach parents to select function-based interventions for challenging behavior: A preliminary study. *Journal of Intellectual & Developmental Disability*, 44(4), 492-496. doi:10.3109/13668250.2018.1464281.

Mostafa, M. H. (2019). Stress and coping strategies among parents of children with autism spectrum disorder. *International Journal of Social Sciences*, 5(1), 17-29. Retrieved from: <https://grdspublishing.org/index.php/people/article/view/1826/>



- Noblejas, M. Á., Maseda, P., Pérez, I., & Pozo, P. (2016). Family adaptation in families with children with Autism Spectrum Disorder (ASD). In *Logotherapy and Existential Analysis* (pp. 179-195). Springer, Cham.
- Papp, L. M., & Hartley, S. L. (2019). Child-present and child-themed marital conflict in daily life of parents of children with and without autism spectrum disorder. *Developmental Psychology, 55*(1), 148–156. doi:10.1037/dev0000631.
- Pasco, G. (2018). The value of early intervention for children with autism. *Paediatrics and Child Health, 28*(8), 364-367. doi:10.1016/j.paed.2018.06.001.
- Pennefather, J., Hieneman, M., Raulston, T. J., & Caraway, N. (2018). Evaluation of an online training program to improve family routines, parental well-being, and the behavior of children with autism. *Research in Autism Spectrum Disorders, 54*, 21-26. doi:10.1016/j.rasd.2018.06.006.
- Poddar, S., Sinha, V. K., & Mukherjee, U. (2017). Impact of acceptance and commitment therapy on valuing behavior of parents of children with neurodevelopmental disorders. *Psychology and Behavioral Science International Journal, 3*(3), 555614. Retrieved from:  
[https://www.researchgate.net/profile/Shuvabrata\\_Poddar/publication/321163999\\_Impact\\_of\\_Acceptance\\_and\\_Commitment\\_Therapy\\_on\\_Valuing\\_Behavior\\_of\\_Parents\\_of\\_Children\\_with\\_Neurodevelopmental\\_Disorders/links/5c8b63b6a6fdcc381754324e/Impact-of-Acceptance-and-Commitment-Therapy-on-Valuing-Behavior-of-Parents-of-Children-with-Neurodevelopmental-Disorders.pdf](https://www.researchgate.net/profile/Shuvabrata_Poddar/publication/321163999_Impact_of_Acceptance_and_Commitment_Therapy_on_Valuing_Behavior_of_Parents_of_Children_with_Neurodevelopmental_Disorders/links/5c8b63b6a6fdcc381754324e/Impact-of-Acceptance-and-Commitment-Therapy-on-Valuing-Behavior-of-Parents-of-Children-with-Neurodevelopmental-Disorders.pdf)

- Prapaththanakunwong, N., Kiatrungrit, K., Hong Sanguansri, S., & Nopmaneejumruslers, K. (2018). Factors associated with parent engagement in DIR/Floortime for treatment of children with autism spectrum disorder. *General Psychiatry, 31*(2), e000009. doi:10.1136/gpsych-2018-000009
- Raches, C., Tomlin, A. M., & Pratt, C. (2018). Integrating applied behavior analysis and infant/early childhood mental health: Implications for early intensive intervention in autism. *Review Journal of Autism and Developmental Disorders, 1-9*. doi:10.1007/s40489-018-0148-2.
- Rafferty-Helmer, J. N., Moore, P. S., Coyne, L., & Reed, K. P. (2016). Changing problematic parent-child interaction in child anxiety disorders: The promise of Acceptance and Commitment Therapy (ACT). *Journal of Contextual Behavioral Science, 5*(1), 64-69. doi:10.1016/j.jcbs.2015.08.002.
- Riosa, P. B., & Weiss, J. A. (2018). Understanding the experiences of parents and children with ASD who attend the "program to assist social thinking" (PAST). *Journal on Developmental Disabilities, 23*(2), 101-101. Retrieved from: <https://search.proquest.com/openview/ed84cea30018162e8198fe1da6f3161e/1?pq-origsite=scholar&cbl=28903>
- Rivard, M., Morin, M., Mercier, C., Terroux, A., Mello, C., & Lépine, A. (2017). Social validity of a training and coaching program for parents of children with autism spectrum disorder on a waiting list for early behavioral intervention. *Journal of Child and Family Studies, 26*(3), 877-887. doi:10.1007/s10826-016-0604-5.

- Robles, N., Carrion, C., Pàmias, M., Parra, I., Conesa, J., Pérez-Navarro, A., ... & Aymerich, M. (2019). AUTAPP Project: Developing a Clinical Decision Support System for personalizing psychosocial interventions in ASD patients through scientific evidence and mobile technologies. *International Journal of Integrated Care (IJIC)*, 19, 1-2. Retrieved from:  
<https://web.b.ebscohost.com/abstract?direct=true&profile=ehost&scope=site&authtype=crawler&jrnl=15684156&AN=138166213&h=AST%2b9Bgw1ESdQ0y8HvtJteJootDDF7kjlNhyLt1VN3Xr3nwDegiO%2f4FPp4uE%2fcs7dyUt9SMNvoB6eGbb4gX1Q%3d%3d&crl=c&resultNs=AdminWebAuth&resultLocal=ErrCrlNotAuth&crlhashurl=login.aspx%3fdirect%3dtrue%26profile%3dehost%26scope%3dsite%26authtype%3dcrawler%26jrnl%3d15684156%26AN%3d138166213/>
- Rutherford, M., Singh-Roy, A., Rush, R., McCartney, D., O'Hare, A., & Forsyth, K. (2019). Parent focused interventions for older children or adults with ASD and parent wellbeing outcomes: A systematic review with meta-analysis. *Research in Autism Spectrum Disorders*, 68, 101450. doi:10.1016/j.rasd.2019.101450.
- Shepherd, D., Csako, R., Landon, J., Goedeke, S., & Ty, K. (2018a). Documenting and understanding parent's intervention choices for their child with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, 48(4), 988-1001. doi:10.1007/s10803-017-3395-7.
- Shepherd, D., Landon, J., & Goedeke, S. (2018b). Symptom severity, caregiver stress and intervention helpfulness assessed using ratings from parents caring for a child with autism. *Autism*, 22(5), 585-596. doi:10.1177/1362361316688869.

- Shepherd, D., Landon, J., Taylor, S., & Goedeke, S. (2018c). Coping and care-related stress in parents of a child with autism spectrum disorder. *Anxiety, Stress, & Coping, 31*(3), 277-290. doi:10.1080/10615806.2018.1442614.
- Solish, A., Perry, A., & Shine, R. (2015). The Parent Involvement Questionnaire: Measuring parents' involvement in behavioral intervention for their children with an autism spectrum disorder. *Journal on Developmental Disabilities, 21*(1), 34-44. Retrieved from: [https://oadd.org/wp-content/uploads/2016/12/41020\\_JoDD\\_21-1\\_v9f\\_34-44\\_Solish\\_et\\_al.pdf](https://oadd.org/wp-content/uploads/2016/12/41020_JoDD_21-1_v9f_34-44_Solish_et_al.pdf)
- Stanislaw, H., Howard, J., & Martin, C. (2019). Helping parents choose treatments for young children with autism: A comparison of applied behavior analysis and eclectic treatments. *Journal of the American Association of Nurse Practitioners*. Retrieved from: [https://journals.lww.com/jaanp/Abstract/online\\_now/Helping\\_parents\\_choose\\_treatments\\_for\\_young.99576.aspx](https://journals.lww.com/jaanp/Abstract/online_now/Helping_parents_choose_treatments_for_young.99576.aspx)
- Teo, J. X., & Lau, B. T. (2018). Parental perceptions, attitudes and involvement in interventions for autism spectrum disorders in Sarawak, Malaysia. *Disability, CBR & Inclusive Development, 29*(1), 26-46. Retrieved from: [www.dcidj.org/article/view/664](http://www.dcidj.org/article/view/664)
- Timmer, S. G., Hawk, B., Tudor, M. E., & Solomon, M. (2018). Reflections on the first efficacy study of Parent-Child Interaction Therapy with children diagnosed with autism spectrum disorder. In *Handbook of Parent-Child Interaction Therapy for Children on the Autism Spectrum* (pp. 501-515). Springer, Cham.

- Turns, B., Jordan, S. S., Callahan, K., Whiting, J., & Springer, N. P. (2019). Assessing the effectiveness of solution-focused brief therapy for couples raising a child with autism: A pilot clinical outcome study. *Journal of Couple & Relationship Therapy, 18*(3), 1-23. doi:10.1080/15332691.2019.1571975.
- Vahey, N. A., Bennett, M., & Whelan, R. (2017). Conceptual advances in the cognitive neuroscience of learning: Implications for Relational Frame Theory. *Journal of Contextual Behavioral Science, 6*(3), 308-313. doi:10.1016/j.jcbs.2017.04.001.
- Vivanti, G. (2017). Individualizing and combining treatments in autism spectrum disorder: Four elements for a theory-driven research agenda. *Current Directions in Psychological Science, 26*(2), 114-119. doi:10.1177/0963721416680262.
- Walz, A., Wang, M., & Bianchini, J. (2019). Parental perspectives on successful parent education and behavioral intervention. *International Journal of Developmental Disabilities, 65*(5), 359-367. doi:10.1080/20473869.2019.1611128.
- Wetherston, V., Gangat, S., Shange, N., Wheeler, K., Karrim, S. S., & Pahl, J. (2017). The views and knowledge of parents of children with autism spectrum disorder on a range of treatments. *South African Journal of Child Health, 11*(3), 117-121. Retrieved from: <https://www.ajol.info/index.php/sajchh/article/view/164482/>
- Whittingham, K., Sanders, M. R., McKinlay, L., & Boyd, R. N. (2019). Parenting intervention combined with acceptance and commitment therapy: A trial with families of children with cerebral palsy. *Journal of Pediatric Psychology, 41*(5), 531-542. doi:10.1093/jpepsy/jsv118.

- Yi, H., Siu, Q. K. Y., Ngan, O. M. Y., & Chan, D. F. Y. (2019). Parents' experiences of screening, diagnosis, and intervention for children with autism spectrum disorder. *American Journal of Orthopsychiatry*. Advance online publication. doi:10.1037/ort0000433.
- Zhou, Y., Yin, H., Wang, M., & Wang, J. (2019). The effect of family-focused psychoeducational therapy for autism spectrum disorder children's parents on parenting self-efficacy and emotion. *Archives of Psychiatric Nursing*, 33(1), 17-22. doi:10.1016/j.apnu.2018.08.002.
- Zody, M. C. (2017). *Acceptance and commitment therapy (ACT) as a one-day workshop for parents of children with an autism spectrum disorder* (Doctoral dissertation). The Wright Institute. Retrieved from: <https://search.proquest.com/openview/7ac6c89a343f32b755c371416fd86e2e/1?pq-origsite=gscholar&cbl=18750&diss=y>