

A Review of Play Therapy Interventions for Chronic Illness: Applications to Childhood Obesity Prevention and Treatment

Elizabeth N. Palmer, Keeley J. Pratt, and Jacqueline Goodway
The Ohio State University

The diagnosis of a childhood chronic illness affects both the child and his or her family, thus interventions should target the diagnosed child and the family system. Utilizing play therapy (PT) to treat childhood chronic illness has the potential to foster children's development of a positive self-image, self-control, and promote a healthy parent-child relationship as the foundation for current and future health behaviors. Currently, limited research exists assessing different PT modalities in the treatment of childhood chronic illness. Furthermore, additional research is needed to evaluate the use of PT with common health diagnoses in childhood, such as overweight and obesity. The purpose of this review is to synthesize the empirical PT research in the treatment of childhood chronic illness (e.g., diabetes), and to provide future intervention recommendations for the prevention and treatment of childhood obesity. Six articles published from 2002 to 2014 were included in the final review based on the listed inclusion/exclusion criteria. Results were organized into 3 themes, family system enhancement, child psychological outcomes, and child and parent perceived health behavior change. Future application of PT interventions to the prevention and treatment of childhood obesity are discussed herein.

Keywords: play therapy, family therapy, childhood obesity, systematic review, chronic illness

In the United States, 12% of children under age 18 are diagnosed with a chronic illness (Maslow, Haydon, Ford, & Halpern, 2011). However, childhood chronic illness has not been consistently defined, making it difficult to obtain an aggregated prevalence of diagnoses (van der Lee, Mokkink, Grootenhuis, Heymans, & Offringa, 2007). For this review, childhood chronic illness was defined using the Pless and Douglas (1971) definition:

... a physical, usually non-fatal condition which lasted longer than three months in a given year or necessitated a continuous period in the hospital of more than one month
... conditions were included if they were of sufficient

severity to interfere with the child's activities in some degree. (as cited in van der Lee et al., 2007, p. 2472)

After the American Medical Association classified obesity as a disease in 2013, obesity in children has been considered a chronic diagnosis (Stoner & Cornwall, 2014). Approximately 32% and 17% of all United States youth ages 2–19 are diagnosed with overweight or obesity, respectively (Ogden, Carroll, Fryar, & Flegal, 2015; Van Cleave, Gortmaker, & Perrin, 2010). Furthermore, the diagnosis of obesity is often comorbid with other chronic diagnoses in childhood, including asthma (Castro-Rodríguez, Holberg, Morgan, Wright, & Martinez, 2001), type I diabetes (Hyppönen et al., 2000), high blood pressure (Freedman, Mei, Srinivasan, Berenson, & Dietz, 2007), ADHD (Agranat-Meged et al., 2005), and depression (Dietz, 2004). The prevalence of overweight and obesity in childhood and the likelihood of medical and psychological comorbidities make obesity the most common, costly, and comprehensive health diagnosis today (Sahoo et al., 2015).

When the initial diagnosis of a chronic illness for a child is made, families are often in shock

This article was published Online First February 23, 2017.

Elizabeth N. Palmer, Keeley J. Pratt, and Jacqueline Goodway, Department of Human Sciences, The Ohio State University.

Correspondence concerning this article should be addressed to Elizabeth N. Palmer, Department of Human Sciences, Human Development and Family Science Program, Couple and Family Therapy Specialization, The Ohio State University, 135 Campbell Hall, 1787 Neil Avenue, Columbus, OH 43210. E-mail: palmer.344@osu.edu

and treatment compliance and medical procedures have to be the immediate focus (Bauman, Drotar, Leventhal, Perrin, & Pless, 1997). The psychosocial and relational needs for the child and family are rarely addressed at the time of diagnosis, which can lead to maladaptive communication and coping (Drotar, 1997). Indeed, children who receive a chronic illness diagnosis have a higher risk of developing mental health conditions when compared with their nondiagnosed peers (Cadman, Rosenbaum, Boyle, & Offord, 1991). Within the family, parents or guardians (hereinafter referred to as "parents") can experience compassion fatigue and strain on the marital and coparenting relationship (Bauman et al., 1997), and siblings may feel less important than the child with the diagnosis (Cohen, 1999). Stress experienced as a result of a childhood diagnosis can predispose family members to develop future health concerns (Halfon & Newacheck, 2010). Thus, the psychological and relational effects of a childhood diagnosis experienced among family members signifies the need for family-based treatment for the child's diagnosis, and to prevent the development of future health complications among family members (Cohen, 1999; Williams, 1997).

Family systems theory (FST) is a family-based approach derived from von Bertalanffy's (1968) seminal work on general systems theory that proposes that organisms are complex, organized, and interactive. FST has been applied in a variety of clinical prevention and treatment fields including family therapy, psychology, social work, nursing, medicine, and dietetics/nutrition. When a child is diagnosed with a chronic illness, the family can organize around and focus on the child's symptoms and treatment. The chronic illness may stabilize the organization of the family in a way that maintains the current family interaction patterns in functional or dysfunctional ways (Rolland & Walsh, 2006).

Parents of a child with a chronic illness may have challenges coping with the diagnosis, adjusting to medical procedures, ensuring financial coverage for treatments, complying with treatment, and living with the overall uncertainty of what the future may bring (Jones & Carnes-Holt, 2010; Jones & Landreth, 2002). Family-based interventions for chronic illness often include the child or "patient," at least one

parent, and tend to focus on treatment compliance and behavioral goals (Williams, 1997). Such an approach may not be effective following a chronic illness diagnosis as there are potential changes to the interactions, patterns, and routines among family members (i.e., parent-child, sibling-sibling) and the entire family's functioning. Furthermore, a child's chronological age and developmental level (i.e., language acquisition, cognitive ability) should be accommodated in interventions so that both the child with the diagnosis and his or her family understand what is happening. Examining best practice interventions for children coping with a chronic illness is not novel (Bauman et al., 1997; Cohen, 1999; Williams, 1997); however, developing innovative research involving the family and improved psychological and relational outcomes among family members is warranted.

There has been a call from governmental organizations and professional associations for the development of family-centered therapeutic services directed at young children under 12 years old (Cornett, 2012; Landreth & Bratton, 2006). Interventions that are developmentally appropriate for children should incorporate what children do naturally: play. Although there has been some success with implementing play-based interventions (i.e., medical and therapeutic play) in health care settings, it is often unclear if these interventions are manualized, selectively focus on medical procedures, or if a trained clinician is involved. This review focuses on manualized, theoretically based, and empirically supported play therapies (PTs) that utilize a trained, licensed mental health clinician.

The Association for Play Therapy (APT, 2001) defines PT as, "the systematic use of a theoretical model to establish an interpersonal process wherein trained play therapists use the therapeutic powers of play to help clients prevent or resolve psychosocial difficulties and achieve optimal growth and development" (p. 20), and is a recommended approach for children under 12 years of age (Landreth, 2012). Play therapy is an umbrella term for the different treatment modalities that can be categorized as a directive (therapist directs play toward an identified goal or presenting issue, often used for skill building; Bratton, Ray, Rhine, & Jones, 2005) or a nondirective approach (the child

directs play while the therapist reflects emotions, observes behaviors, and offers unconditional positive regard; Landreth & Bratton, 2006).

Many different helping professionals (e.g., child life specialists, social workers, child psychologists) utilize PT techniques, but may not be trained play therapists. A play therapist is a licensed mental health professional with an advanced degree in a mental health field that has obtained extensive clinical experience and supervision in PT. A play therapist with advanced training in PT may also hold credentials as a Registered Play Therapist/Supervisor through APT.

Despite differences in the philosophy, structure, and techniques utilized in PT, the general goal is to help children prevent, identify, and resolve challenges that they are currently facing (Gil, Drewes, & Carrigan, 2005; Landreth & Bratton, 2006; Webb, 2011). This goal is extended to childhood chronic illness, where the specific applications of PT that have been empirically tested include child-centered play therapy (CCPT) and filial therapy (FT). These two modalities are developmentally appropriate for young children (Bratton et al., 2005; Landreth & Lobaugh, 1998; Ware, McNeil, Masse, & Stevens, 2008), are effective with diagnoses that are often comorbid with chronic illnesses and childhood obesity (i.e., depression, Baggerly, 2004; Bratton & Ray, 2000), and can be tailored for children from different cultures (Gil et al., 2005).

Play Therapy Modalities

The practice of PT has been in existence for over a century, where the term “play therapy” is used to refer to a variety of treatment modalities using play to help young children change the way they cope with difficult problems and emotions (Bratton et al., 2005; Landreth, 2012). Traditional directive approaches of PT (i.e., cognitive-behavioral, psychodynamic, etc.) emphasize the need to resolve the child’s negative symptomatology. Directive PT techniques may include interpretations of the symbolism in the child’s play and analysis of the child’s dreams or conscious fantasies (Landreth, 2012).

The development of Carl Rogers’s (1951) person-centered therapy, and its focus on the client instead of the psychopathology, was the

inspiration for CCPT. Similar to person-centered therapy, CCPT highlights the development of the relationship between the therapist and child, including qualities like trust and acceptance, as the mechanism for healing. Inspired by this approach, play therapists like Virginia Axline (1947) developed nondirective PTs that focus on strengthening the relationship between the child and his or her family, as opposed to the resolution of specific goals and outcomes. The nondirective therapist supports the child in session by providing a structure to the therapeutic work but does not control the content of the session (Axline, 1947). The different roles of the therapist in session are what distinguishes directive and nondirective PT modalities. According to a meta-analysis of 94 PT experimental design outcome studies, Bratton and colleagues (2005) found a large positive effect for treatment outcomes across all PT modalities regardless of child gender, population, and setting (range: $d = .80 - 1.75$).

Child-Centered Play Therapy

Child-centered play therapy is defined as an interpersonal relationship between the child and therapist, where the therapist facilitates the development of a safe relationship for the child to fully express and explore his or her self through play (Landreth, 2012). Child-centered play therapy is a nondirective and noninterpretive approach to individual child therapy when compared with traditional, directive PT (Landreth, 2001). Lambert and colleagues (2007) reported that CCPT is the most frequently utilized PT modality of practicing play therapists.

Filial Therapy

Filial therapy is a didactic approach that involves training parents in CCPT techniques (Andronico, Fidler, Guernsey, & Guernsey, 1967; Cornett, 2012). The therapist utilizes directive techniques to train the parent in basic and nondirective CCPT principles and skills to use with his or her child. The therapist then acts as the supervisor for the parent during weekly therapeutic sessions with the child (Landreth, 2001). The intentions of FT are to empower the child; enable the parent to convey feelings of empathy, compassion, and acceptance to the child so that he or she can better understand; strengthen the bond be-

tween the child and the parent; and to intensify the child's self-worth, self-concept, and self-respect (Guernsey, 1964; Tew, Landreth, Joiner, & Solt, 2002). Filial therapy had the largest positive effect (large $\geq .8$, medium = .5, and small effect = .2, Cohen, 1977) in the aforementioned meta-analysis (Bratton et al., 2005) when administered by a parent ($d = 1.75$) or by teacher/mentor ($d = 1.06$). PT without a parent present also had a large effect size ($d = .80$), but was slightly less than FT. LeBlanc and Ritchie (2001) also found that PT had the largest effect size when parents were included in therapy.

Specific manualized applications of FT utilized in research include child-parent relationship therapy (CPRT) and parent-child interaction therapy (PCIT). Child-parent relationship therapy is a 10-session adaptation of FT, which has been found to be effective when used in medical settings (Landreth & Bratton, 2006). Parent-child interaction therapy combines a filial model to enhance the parent-child relationship while incorporating and supporting basic behavioral techniques to help modify the child's behavior (Querido Bearss, & Eyberg, 2002; Landreth & Bratton, 2006). Parent-child interaction therapy has been found to be effective in reducing the number of future abuse reports in violent parent-child relationships (Chaffin et al., 2004) and improving parenting stress and young children's externalizing behaviors (Eyberg, Boggs, & Algina, 1995) in the short and long term (Eyberg et al., 2001).

To date, research on childhood chronic illness has demonstrated PT modalities using directive or nondirective methods can benefit children and their families (Bratton et al., 2005; Glazer-Waldman, Zimmerman, Landreth, & Norton, 1992; Landreth & Bratton, 2006; O'Connor, Schaefer, & Braverman, 2015). Although some evidence exists for using these therapies for childhood chronic illness, there is a call for more rigorous research applied to common chronic illness diagnoses in childhood (Anderson & Davis, 2011), such as childhood obesity. The purpose of this review is to synthesize the empirical research on PT modalities applied to childhood chronic illness (i.e., diabetes) and to provide recommendations for future PT interventions for children with overweight and obesity.

Method

To locate articles for this review, searches were conducted in PsychInfo, Ebsco, PubMed, and Google Scholar using the terms (or a combination of terms): play, filial, parent-child interaction, parent-child relationship therapy, chronic, health, disease, hospital, medical, and illness. Two foundational texts (Baggerly, Ray, & Bratton, 2010; Landreth, 2012) were also reviewed for research applications of PT.

Inclusion criteria was comprised of: (a) children ages 2–12 years-old, due to the age appropriateness for PT; (b) established PT, CCPT, and FT interventions as previously defined; (c) empirical peer-reviewed qualitative or quantitative research designs; (d) publication dates between 1990 and 2014; (e) articles were written in (or translated to) English; and lastly; (f) articles had to include an aspect of childhood health, disease, or illness (Pless & Douglas, 1971). We excluded those articles which focused on childhood developmental delays or learning disorders (i.e., autism spectrum diagnoses). We excluded unpublished non-peer-reviewed research (i.e., doctoral dissertations). The rationale for this exclusion criteria was supported by Vickers and Smith (2000), who found that the inclusion of dissertations rarely influences the conclusions of a systematic review.

The initial search produced 15 articles that were further reviewed for inclusion. Six were included in the final review; nine articles were excluded because they were not empirical, did not meet the chronic illness definition provided, or could not be classified as PT, CCPT, or FT. Of the six included articles, there were two qualitative, two quantitative, and two that utilized mixed methods. The quantitative articles used pre/posttest designs. CCPT (nondirective) was used in two articles, FT (didactic directive/nondirective) was used in two articles, and traditional PT (directive) was used in two articles. The results are organized into three themes: family system enhancement, child psychological outcomes, and child and parent perceived health behavior change (Figure 1).

Results

The six articles included in the final review assessed multiple outcomes so that articles

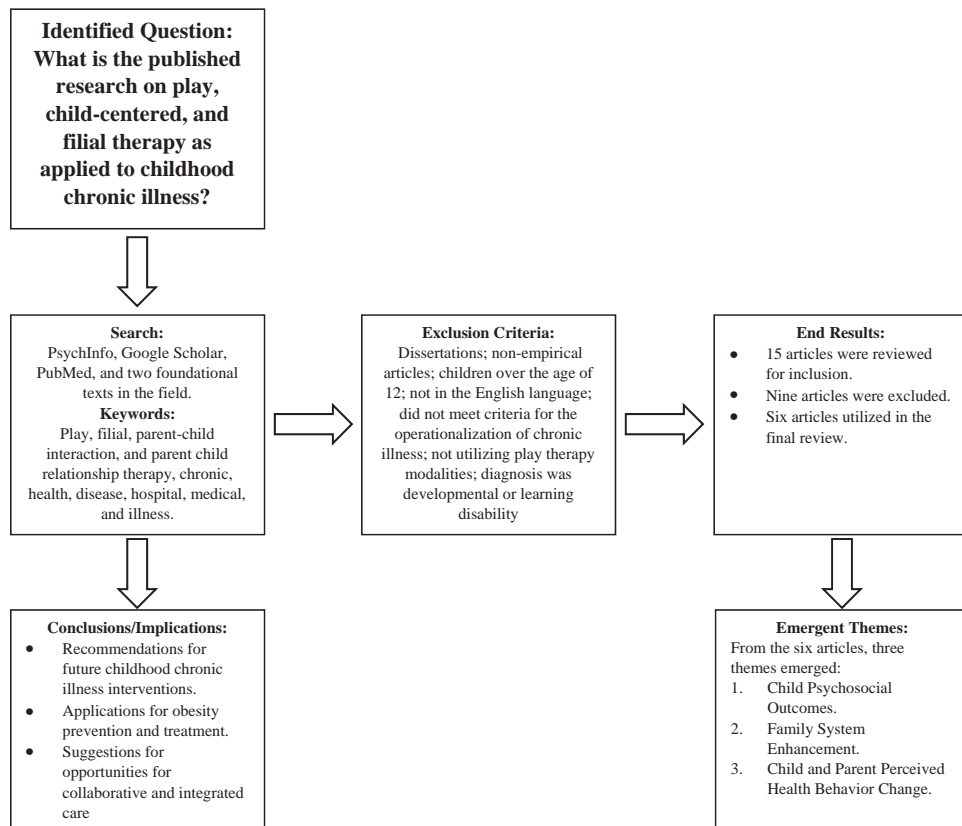


Figure 1. Flowchart of a systematic review of the literature published on play therapy interventions applied to childhood chronic illness.

could be included in more than one thematic area. Table 1 contains the included articles organized by theme, citation, participant diagnosis, and an example outcome within the provided theme.

Theme 1: Family System Enhancement ($n = 2$)

The theme family system enhancement was defined as an improvement in the overall family's functioning including the relationships between family subsystems (i.e., parent and child subsystems), two individual family members (i.e., siblings), and among larger systems (i.e., the overall family system). Glazer-Waldman et al. (1992) found that FT was associated with increased parental acceptance of the child, accuracy in assessing the child's anxiety level, and promotion of par-

ents' sense of control to help their child with a chronic illness. In the qualitative findings, parents reported that play would become a regular activity in their home because it gave them an opportunity to have positive interactions with their children unrelated to the chronic illness diagnosis. Tew and colleagues (2002) stated that after a 10-week FT training, parents of a child with a chronic illness reported increased feelings of acceptance toward their child and disclosed that their stress levels were significantly reduced. Additionally, the parents assigned to the FT intervention perceived that their children had less behavioral problems and anxiety and depression symptoms. The authors attribute some of these results to the 30-min play sessions prescribed by FT which gave parents a safe space to help their children develop autonomy.

Table 1
Emergent Themes and Example Outcomes From the Literature on Play Therapy Interventions for Children Diagnosed With a Chronic Illness

Authors	Year	Method	Study (N)	Type of therapy	Chronic illness diagnosis	Example outcome by theme		
						Family system enhancement	Child psychosocial outcomes	Child and parent perceived health behavior change
Jones & Landreth	2002	Mixed	30	CCPT	Diabetes		Reduced anxiety and negative behaviors	Increased treatment adherence to diabetes regime
Glazer-Waldman, Zimmerman, Landreth, & Norton	1992	Mixed	6	FT	Chronic Illness NOS	Decreased stress level of the parent	Decreased anxiety for child and parent	
Tew, Landreth, Joiner, & Solt	2002	Quan.	28	FT	Chronic Illness NOS	Increased parental acceptance of the child	Decreased emotional and behavior problems	
Jones & Carnes-Holt	2002	Quan.	30	CCPT	Diabetes		Decreased anxiety and behavior problems	Increased adaption to diabetes
Pélicand, Gagnayre, Sandrin-Berthon, & Aujolat	2006	Qual.	14	PT	Diabetes		Increased emotional expression	Developed/reinforced treatment-related skills
Gold, Grotheus, Jossberger, Gruber, & Meltzer	2014	Qual.	9	PT	Liver Transplant		Decrease in fear related to hospital/treatment	

Note. Quan. = quantitative; Qual. = qualitative; CCPT = child-centered play therapy; FT = filial therapy; PT = play therapy.

Theme 2: Child Psychological Outcomes (*n* = 6)

The theme child psychological outcomes encompassed changes in the child's psychological functioning (i.e., emotional expression). In three articles, post-PT researchers reported reductions in child behavior problems indicated by the Filial Problems Checklist and Child Behavior Checklist (Jones & Carnes-Holt, 2010; Jones & Landreth, 2002; Tew et al., 2002), and greater child emotional expression (Gold, Grothues, Jossberger, Gruber, & Melter, 2014; Pélicand, Gagnayre, Sandrin-Berthon, & Aujoulat, 2006). Jones and Landreth (2002) reported that children who participated in a CCPT intervention were able to address and work through issues, including anxiety and depression symptoms, related to their chronic illness diagnosis. Gold and colleagues (2014) reported that parents noted improved coping skills in their children, including reductions in sleeping problems and increased self-efficacy after participating in a PT intervention. Another PT intervention specified that children were better able to express their feelings related to their chronic illness through play when using puppets (Pélicand et al., 2006).

Theme 3: Child and Parent Perceived Health Behavior Change (*n* = 3)

The theme child and parent perceived health behavior change includes child and parent perceived changes in the interactions of the family system and its members within the health care environment. Following participation in an FT intervention, researchers of two studies documented positive changes in the overall family's functioning (Glazer-Waldman et al., 1992; Tew et al., 2002). Children had increases in treatment adherence to their medical regimen (Jones & Landreth, 2002), and PT helped to develop or reinforce treatment-related skills, including the management of blood sugar for children with diabetes (Pélicand et al., 2006). Jones and Carnes-Holt (2010) noted positive changes in children's diabetes compliance following participation in CCPT as part of a multidisciplinary approach to diabetes management. Glazer-Waldman and colleagues (1992) analyzed video-recorded play sessions and found that parents believed FT encouraged positive changes in themselves and

their children, as well as their relationship, and children reported that they could better work through their concerns (Glazer-Waldman et al., 1992; Jones & Landreth, 2002). The themes outlined in this paper provide a foundation upon which future empirical research, including interventions for children with overweight and obesity, can use PT modalities to intervene in families with a child diagnosed with a chronic illness.

Clinical Application for the Prevention and Treatment of Childhood Obesity

Given that PT is best suited for children under 12 years old, mental and behavioral health providers who work with young children with a chronic illness diagnosis may benefit from incorporating PT modalities into their existing clinical approaches. Similar to children with a chronic illness diagnosis, children with an overweight or obese weight status are more likely to struggle with psychological (e.g., depression, negative body image; Russell-Mayhew, McVey, Bardick, & Ireland, 2012), social and relational (e.g., bullying, peer victimization; Puhl & Latner, 2007), and other medical comorbidities (e.g., asthma, kidney disease; Mather, Cox, Enns, & Sareen, 2009; Petry, Barry, Pietrzak, & Wagner, 2008). Childhood obesity interventions are most effective when the intervention is family based and targets both parents and the children (Berge & Everts, 2011). Furthermore, childhood obesity interventions that are grounded in FST have shown potential for enhancing the parent-child relationship in which health behaviors are learned and modeled (Kaplan, Arnold, Irby, Boles, & Skelton, 2014; Kitzman-Ulrich et al., 2010). The cumulative evidence on the multifaceted effects that obesity has on children, the role of parent-modeled health behaviors, and the evidence on the benefits of intervening on the parent-child relationship in obesity interventions lends promise to the application of PT interventions for childhood obesity.

Specifically, PT fosters children's development of a positive self-image and self-control, and enhances the parent-child relationship for current and future health behaviors (Bratton et al., 2005; Glazer-Waldman et al., 1992). These applications are particularly relevant for children with an overweight or an obese weight

status who may struggle with having a poor body image, identifying hunger and fullness cues, adopting new dietary and physical activity behaviors, and feeling supported by their parents in trying to adopt a healthy lifestyle. PT techniques are adaptable to different settings such as hospitals, agencies, offices, schools, or in-home environments (Parsons, 2015). PT techniques have also demonstrated effectiveness across behavioral and humanistic approaches to therapy, making them accessible to therapists regardless of theoretical orientation (Bratton et al., 2005; Cornett, 2012; Webb, 2011).

Although PT modalities may be directive or nondirective, directive techniques are used when the number of sessions is limited, and the focus of the sessions are symptom- or behavior-specific (Jones, Casado, & Robinson, 2003). In the case of childhood obesity, it is likely that sessions will occur in a health care setting, be time limited, and focus on adopting or continuing healthy behaviors, thus the descriptions provided below are more directive in nature. Potential applications to childhood obesity prevention and treatment include: developing a positive self-image and self-control and adjusting to treatment protocols and behavior changes (Jones & Carnes-Holt, 2010; Jones & Landreth, 2002).

Positive self-image and self-control.

Often children with overweight or obesity develop body image insecurities, with children as young as three years old demonstrating weight-based bias toward their overweight peers (Cramer & Steinwert, 1998). Play therapy can reduce potential weight-related bias that children may develop toward individuals with larger bodies as they grow older. Children can explore the ways their bodies are functional and unique during PT through imaginary play with dolls and figures that are representative of a population diverse in body sizes and types.

For children with overweight and obesity, it is important that they see dolls resembling their shape and size incorporated into PT. Additionally, art materials can be used so that children can draw their body and highlight their unique physical characteristics (i.e., eyes, hair) independent of shape and size (Pratt, Palmer, & Walker, 2015). Parents can also seek to enhance their child's body esteem by modeling positive "body talk" during nondirective FT (Berge et

al., 2013). Parents who involve children in sports and physical activity can talk with them about how their body functions and can model tasks such as throwing, running, and balancing to help children view their bodies as more than a physical presence, but also a functional one. This could create an opportunity for parents to acknowledge their child's strengths by highlighting the progress their child is making toward achieving specific tasks, like running longer, while also working toward a healthy lifestyle and spending quality time together.

Treatment protocols and behavior change.

Childhood obesity treatment protocols often center on the child adopting new or more intensive dietary and physical activity behaviors. For young children, this task often falls on the parents to provide the structure for physical activity and the responsibility for what foods are offered, and when and where foods are served (Barlow, Bobra, Elliott, Brownson, & Haire-Joshu, 2007; Satter, 2011). One way to engage young children in healthy mealtime behaviors is through imaginary play during meal preparations and dining. Common toys currently used by play therapists include plates, silverware, plastic food, bottles, pots, pans, and stoves which can be included in imaginary play relevant to feeding and eating. Additionally, play kitchenette sets often are equipped with a variety of mock foods including healthy options like fruits, vegetables, eggs, milk, and so forth. Young children who may struggle with trying new foods or picky eating could benefit from experiencing these foods through imaginary play before trying them during meals or snacks. Imaginary play also allows the child to have control over the mock new foods that s/he tries, rather than receiving pressure from a parent or childcare worker.

Play therapy could also be used to normalize new dietary and physical activity behavior changes, and conversations with children about adopting these new behaviors. Through play, children can enact scenarios where families are physically active together and enjoy family meals, which could serve to prevent future pushback from children for behavior change. Lastly, parents can provide children with access to a variety of different low-cost sports/physical activity equipment (balls, rackets, makeshift goals, bases, etc.) and give the child the autonomy to select what game to play or make up.

The child can take on the role of the coach or team captain to lead the family members in fun physical activities. This can allow the family to engage in physical activity together while also developing the child's leadership and independence.

Discussion

The theme family system enhancement encompassed positive outcomes like decreased parental stress and increased acceptance of their child following a PT intervention. Although one study cited a relationship change following FT and parental acceptance of the child, there are much more bidirectional outcomes that can be measured in families with a child diagnosed with a chronic illness (e.g., Glazer-Waldman et al., 1992). Specifically, dyadic perceptions from both the child and the parent should be simultaneously assessed (parental acceptance of the child, and child's perception of parental acceptance). Additional triadic perspectives, including additional family members such as sibling and coparent perspectives, should be obtained. Similar to chronic illness, family members' participation in dietary and physical activity behavior changes in the treatment of childhood obesity can help the child feel supported (Epstein, Valoski, Wing, & McCurley, 1994).

The impact that a childhood chronic illness can have on the couple/coparent and sibling relationships are well documented in the literature (Barzel & Reid, 2011; Eddy & Walker, 1999; Sharpe & Rossiter, 2002). Future research should take a strengths-based approach to the assessment of existing family strengths or areas of confidence and use PT to extend these strengths to manage and cope with new behavior change or illness management in the family. For example, parents who feel most confident in their skills when preparing their child's meal could build upon this by including the child in the meal prep process to model healthy food preparation and eating a balanced and nutritious meal. Older siblings may also be helpful in modeling healthy behaviors, due to their influential relationship with the child diagnosed with a chronic illness.

The theme of child psychological outcomes contained the most cited outcomes ($n = 6$). The six articles detailed outcomes that emphasized both externalizing behaviors (discussed as be-

havioral problems) and internalizing behaviors, such as anxiety and emotional expression. It is important to note that no child social outcomes were assessed. For young children diagnosed with a chronic illness, developing social skills and having positive peer relationships are especially important because of the challenges due to the stigma associated with their illness and medical treatment in school (i.e., insulin shots). Positive peer relationships are important protective factors for children to keep their life "normal" during medical treatments and interventions (Forgeron et al., 2010; La Greca, Bearman, & Moore, 2002). However, research has consistently demonstrated that children with overweight or obesity commonly experience weight bias and stigma from their peers (Cramer & Steinwert, 1998; Puhl & Latner, 2007).

The literature documenting the harmful psychological, social, physical, and economic effects of weight bias has tripled in the past decade. Weight-bias scholars have documented common misperceptions for the cause of obesity that blame the individual for their weight status, simplify the development of obesity as being purely a lack of willpower or behavioral control, and neglect the role of the built environment and sociocultural preferences for health behaviors and ideal body shape and size (Chaput, Ferraro, Prud'homme, & Sharma, 2014; Puhl & Brownell, 2001; Puhl & Heuer, 2010). Given the growth of research assessing the harmful effects of peer weight-bias and victimization on children, researchers studying the effects of peer bias for childhood chronic illness may benefit from using the same types of assessments and methods conducted within the weight-bias literature.

The final theme, child and parent perceived health behavior change, detailed family outcomes in health care settings (i.e., increased adherence to treatment, comfort with medical procedures, increased adjustment to illness). The quantitative research in this theme focused on children diagnosed with diabetes and associated outcomes (i.e., blood sugar levels). This theme demonstrated how a multidisciplinary health care team could support the goals of the entire family in the health care system through assessing family's experiences in health care and their satisfaction with treatment and the health care team. For example, in the childhood obesity literature, researchers have become in-

creasingly interested in child and parent satisfaction and alliance with the health care team in hopes of decreasing higher attrition rates from obesity treatment programs (Skelton, Irby, & Geiger, 2014).

Limitations

Few researchers have taken the opportunity to adapt PT interventions to children diagnosed with chronic illness, thus the relevant research is limited. To conduct the strictest review, the current authors excluded research that was not peer reviewed and unpublished works, like doctoral dissertations, from those articles reviewed. The small sample size of peer-reviewed literature reflects the need for more research to be conducted in this area. The majority of families in these interventions identified as White or Caucasian, limiting generalizability to other racial/ethnic groups. Additionally, many PT modalities include parent participation in some capacity; while this is often recognized as a strength, children who have parents that are not present may be excluded even though they may have another caring adult (i.e., grandparent, aunt/uncle, older sibling) who may be able to participate in PT. There are multiple barriers that influence parents' ability to engage and participate in PT, including difficulty taking unpaid time off work to attend therapy, paying for or finding childcare for siblings not engaged in therapy, and covering the costs of therapy, including insurance coverage or out-of-pocket fees (Johnson, Bruhn, Winek, Krepps, & Wiley, 1999; Landreth, 2012). Since PT is more effective for children when their parents participate, future research should explore creative ways to accommodate families who may have financial and other barriers (LeBlanc & Ritchie, 2001).

Research on childhood chronic illness has demonstrated that PT, CCPT, and FT can enhance family system functioning, improve children's psychosocial outcomes, and promote positive health behaviors for children and the family system (Bratton et al., 2005; Glazer-Waldman et al., 1992). Although positive evidence exists using these therapies for childhood chronic illness, it is evident that more disease-specific research is needed, including research specific to childhood obesity prevention and treatment.

Conclusion

The long-term consequences of untreated childhood conditions, including obesity, can be economically and emotionally costly to families. Play therapy holds promise for delivering developmentally appropriate, cost-effective, and family-centered therapeutic interventions for children diagnosed with a chronic illness.

References

- Agranat-Meged, A. N., Deitcher, C., Goldzweig, G., Leibenson, L., Stein, M., & Galili-Weisstub, E. (2005). Childhood obesity and attention deficit/hyperactivity disorder: A newly described comorbidity in obese hospitalized children. *International Journal of Eating Disorders*, *37*, 357–359. <http://dx.doi.org/10.1002/eat.20096>
- Anderson, T., & Davis, C. (2011). Evidence-based practice with families of chronically ill children: A critical literature review. *Journal of Evidence-Based Social Work*, *8*, 416–425. <http://dx.doi.org/10.1080/15433710903269172>
- Andronico, M. P., Fidler, J., Guernsey, B., Jr., & Guernsey, L. F. (1967). The combination of didactic and dynamic elements in filial therapy. *International Journal of Group Psychotherapy*, *17*, 10–17.
- Association for Play Therapy. (2001, June). Play therapy. *Association for Play Therapy Newsletter*, 20.
- Axline, V. M. (1947). Nondirective therapy for poor readers. *Journal of Consulting Psychology*, *11*, 61–69. <http://dx.doi.org/10.1037/h0063079>
- Baggerly, J. (2004). The effects of child-centered group play therapy on self-concept, depression, and anxiety of children who are homeless. *International Journal of Play Therapy*, *13*, 31–51. <http://dx.doi.org/10.1037/h0088889>
- Baggerly, J. N., Ray, D. C., & Bratton, S. C. (Eds.). (2010). *Child-centered play therapy research: The evidence base for effective practice*. Hoboken, NJ: Wiley. <http://dx.doi.org/10.1002/9781118269626>
- Barlow, S. E., Bobra, S. R., Elliott, M. B., Brownson, R. C., & Haire-Joshu, D. (2007). Recognition of childhood overweight during health supervision visits: Does BMI help pediatricians? *Obesity*, *15*, 225–232. <http://dx.doi.org/10.1038/oby.2007.535>
- Barzel, M., & Reid, G. J. (2011). Coparenting in relation to children's psychosocial and diabetes-specific adjustment. *Journal of Pediatric Psychology*, *36*, 618–629. <http://dx.doi.org/10.1093/jpepsy/jsr022>
- Bauman, L. J., Drotar, D., Leventhal, J. M., Perrin, E. C., & Pless, I. B. (1997). A review of psychosocial interventions for children with chronic

- health conditions. *Pediatrics*, *100*, 244–251. <http://dx.doi.org/10.1542/peds.100.2.244>
- Berge, J. M., & Everts, J. C. (2011). Family-based interventions targeting childhood obesity: A meta-analysis. *Childhood Obesity*, *7*, 110–121. <http://dx.doi.org/10.1089/chi.2011.07.02.1004.berge>
- Berge, J. M., Maclehose, R., Loth, K. A., Eisenberg, M., Bucchianeri, M. M., & Neumark-Sztainer, D. (2013). Parent conversations about healthful eating and weight: Associations with adolescent disordered eating behaviors. *Journal of the American Medical Association Pediatrics*, *167*, 746–753.
- Bratton, S., & Ray, D. (2000). What the research shows about play therapy. *International Journal of Play Therapy*, *9*, 47–88. <http://dx.doi.org/10.1037/h0089440>
- Bratton, S. C., Ray, D., Rhine, T., & Jones, L. (2005). The efficacy of play therapy with children: A meta-analytic review of treatment outcomes. *Professional Psychology: Research and Practice*, *36*, 376–390. <http://dx.doi.org/10.1037/0735-7028.36.4.376>
- Cadman, D., Rosenbaum, P., Boyle, M., & Offord, D. R. (1991). Children with chronic illness: Family and parent demographic characteristics and psychosocial adjustment. *Pediatrics*, *87*, 884–889.
- Castro-Rodríguez, J. A., Holberg, C. J., Morgan, W. J., Wright, A. L., & Martinez, F. D. (2001). Increased incidence of asthmalike symptoms in girls who become overweight or obese during the school years. *American Journal of Respiratory and Critical Care Medicine*, *163*, 1344–1349. <http://dx.doi.org/10.1164/ajrccm.163.6.2006140>
- Chaffin, M., Silovsky, J. F., Funderburk, B., Valle, L. A., Brexan, E. V., Balachova, T., . . . Bonner, B. L. (2004). Parent-child interaction therapy with physically abusive parents: Efficacy for reducing future abuse reports. *Journal of Consulting and Clinical Psychology*, *72*, 500–510. <http://dx.doi.org/10.1037/0022-006X.72.3.500>
- Chaput, J. P., Ferraro, Z. M., Prud'homme, D., & Sharma, A. M. (2014). Widespread misconceptions about obesity. *Canadian Family Physician Medecin de Famille Canadien*, *60*, 973–975, 981–984.
- Cohen, J. A. (1977). *Statistical power analysis for the behavioral sciences*. New York, NY: Academic Press.
- Cohen, M. S. (1999). Families coping with childhood chronic illness: A research review. *Families, Systems, & Health*, *17*, 149–164. <http://dx.doi.org/10.1037/h0089879>
- Cornett, N. (2012). A filial therapy model through a family therapy lens: See the possibilities. *The Family Journal*, *20*, 274–282. <http://dx.doi.org/10.1177/1066480712449128>
- Cramer, P., & Steinwert, T. (1998). Thin is good, fat is bad: How early does it begin? *Journal of Applied Developmental Psychology*, *19*, 429–451. [http://dx.doi.org/10.1016/S0193-3973\(99\)80049-5](http://dx.doi.org/10.1016/S0193-3973(99)80049-5)
- Dietz, W. H. (2004). Overweight in childhood and adolescence. *The New England Journal of Medicine*, *350*, 855–857. <http://dx.doi.org/10.1056/NEJMp048008>
- Drotar, D. (1997). Relating parent and family functioning to the psychological adjustment of children with chronic health conditions: What have we learned? What do we need to know? *Journal of Pediatric Psychology*, *22*, 149–165. <http://dx.doi.org/10.1093/jpepsy/22.2.149>
- Eddy, L. L., & Walker, A. J. (1999). The impact of children with chronic health problems on marriage. *Journal of Family Nursing*, *5*, 10–32. <http://dx.doi.org/10.1177/107484079900500102>
- Epstein, L. H., Valoski, A., Wing, R. R., & McCurley, J. (1994). Ten-year outcomes of behavioral family-based treatment for childhood obesity. *Health Psychology*, *13*, 373–383. <http://dx.doi.org/10.1037/0278-6133.13.5.373>
- Eyberg, S. M., Boggs, S. R., & Algina, J. (1995). Parent-child interaction therapy: A psychosocial model for the treatment of young children with conduct problem behavior and their families. *Psychopharmacology Bulletin*, *31*, 83–91.
- Eyberg, S. M., Funderburk, B. W., Hembree-Kigin, T. L., McNeil, C. B., Querido, J. G., & Hood, K. K. (2001). Parent-child interaction therapy with behavior problem children: One and two year maintenance of treatment effects in the family. *Child & Family Behavior Therapy*, *23*, 1–20. http://dx.doi.org/10.1300/J019v23n04_01
- Forgeron, P. A., King, S., Stinson, J. N., McGrath, P. J., MacDonald, A. J., & Chambers, C. T. (2010). Social functioning and peer relationships in children and adolescents with chronic pain: A systematic review. *Pain Research & Management*, *15*, 27–41. <http://dx.doi.org/10.1155/2010/820407>
- Freedman, D. S., Mei, Z., Srinivasan, S. R., Berenson, G. S., & Dietz, W. H. (2007). Cardiovascular risk factors and excess adiposity among overweight children and adolescents: The Bogalusa Heart Study. *The Journal of Pediatrics*, *150*, 12–17.e2. <http://dx.doi.org/10.1016/j.jpeds.2006.08.042>
- Gil, E., Drewes, A. A., & Carrigan, S. (2005). Cultural issues in play therapy. *Art Therapy*, *23*, 91–95.
- Glazer-Waldman, H. R., Zimmerman, J. E., Landreth, G. L., & Norton, D. (1992). Filial therapy: An intervention for parents of children with chronic illness. *International Journal of Play Therapy*, *1*, 31–42. <http://dx.doi.org/10.1037/h0090233>
- Gold, K., Grothues, D., Jossberger, H., Gruber, H., & Melter, M. (2014). Parents' perceptions of play-therapeutic interventions to improve coping strat-

- egies of liver-transplanted children: A qualitative study. *International Journal of Play Therapy*, 23, 146–160. <http://dx.doi.org/10.1037/a0037412>
- Guerney, B., Jr. (1964). Filial therapy: Description and rationale. *Journal of Consulting Psychology*, 28, 304–310. <http://dx.doi.org/10.1037/h0041340>
- Halfon, N., & Newacheck, P. W. (2010). Evolving notions of childhood chronic illness. *Journal of the American Medical Association*, 303, 665–666. <http://dx.doi.org/10.1001/jama.2010.130>
- Hyppönen, E., Virtanen, S. M., Kenward, M. G., Knip, M., Akerblom, H. K., & the Childhood Diabetes in Finland Study Group. (2000). Obesity, increased linear growth, and risk of type 1 diabetes in children. *Diabetes Care*, 23, 1755–1760. <http://dx.doi.org/10.2337/diacare.23.12.1755>
- Johnson, L., Bruhn, R., Winek, J., Krepps, J., & Wiley, K. (1999). The use of child-centered play therapy and filial therapy with Head Start families: A brief report. *Journal of Marital and Family Therapy*, 25, 169–176. <http://dx.doi.org/10.1111/j.1752-0606.1999.tb01120.x>
- Jones, E. M., & Carnes-Holt, K. (2010). The efficacy of intensive individual child-centered play therapy for chronically ill children. In J. N. Baggerly, D. C. Ray, & S. C. Bratton (Eds.), *Child-centered play therapy research: The evidence base for effective practice* (pp. 51–67). Hoboken, NJ: Wiley. <http://dx.doi.org/10.1002/9781118269626.ch3>
- Jones, E. M., & Landreth, G. (2002). The efficacy of intensive individual play therapy for chronically ill children. *International Journal of Play Therapy*, 11, 117–140. <http://dx.doi.org/10.1037/h0088860>
- Jones, K. D., Casado, M., & Robinson, E. H., III. (2003). Structured play therapy: A model for choosing topics and activities. *International Journal of Play Therapy*, 12, 31–45. <http://dx.doi.org/10.1037/h0088870>
- Kaplan, S. G., Arnold, E. M., Irby, M. B., Boles, K. A., & Skelton, J. A. (2014). Family systems theory and obesity treatment: Applications for clinicians. *Childhood Obesity and Nutrition*, 6, 24–29. <http://dx.doi.org/10.1177/1941406413516001>
- Kitzman-Ulrich, H., Wilson, D. K., St. George, S. M., Lawman, H., Segal, M., & Fairchild, A. (2010). The integration of a family systems approach for understanding youth obesity, physical activity, and dietary programs. *Clinical Child and Family Psychology Review*, 13, 231–253. <http://dx.doi.org/10.1007/s10567-010-0073-0>
- La Greca, A. M., Bearman, K. J., & Moore, H. (2002). Peer relations of youth with pediatric conditions and health risks: Promoting social support and healthy lifestyles. *Journal of Developmental and Behavioral Pediatrics*, 23, 271–280. <http://dx.doi.org/10.1097/00004703-200208000-00013>
- Lambert, S. F., LeBlanc, M., Mullen, J. A., Ray, D., Baggerly, J., White, J., & Kaplan, D. (2007). Learning more about those who play in session: The National Play Therapy in Counseling Practices Project (Phase I). *Journal of Counseling & Development*, 85, 42–46. <http://dx.doi.org/10.1002/j.1556-6678.2007.tb00442.x>
- Landreth, G. (2001). *Innovations in play therapy*. Philadelphia, PA: Brunner-Routledge.
- Landreth, G. L. (2012). *Play therapy: The art of the relationship*. New York, NY: Brunner-Routledge.
- Landreth, G. L., & Bratton, S. C. (2006). *Child parent relationship therapy (CPRT): A 10-session filial therapy model*. New York, NY: Taylor & Francis.
- Landreth, G. L., & Lobaugh, A. F. (1998). Filial therapy with incarcerated fathers: Effects on parental acceptance of child, parental stress, and child adjustment. *Journal of Counseling & Development*, 76, 157–165. <http://dx.doi.org/10.1002/j.1556-6676.1998.tb02388.x>
- LeBlanc, M., & Ritchie, M. (2001). A meta-analysis of play therapy outcomes. *Counseling Psychology Quarterly*, 14, 149–163. <http://dx.doi.org/10.1080/09515070110059142>
- Maslow, G. R., Haydon, A. A., Ford, C. A., & Halpern, C. T. (2011). Young adult outcomes of children growing up with chronic illness: An analysis of the National Longitudinal Study of Adolescent Health. *Archives of Pediatrics & Adolescent Medicine*, 165, 256–261. <http://dx.doi.org/10.1001/archpediatrics.2010.287>
- Mather, A. A., Cox, B. J., Enns, M. W., & Sareen, J. (2009). Associations of obesity with psychiatric disorders and suicidal behaviors in a nationally representative sample. *Journal of Psychosomatic Research*, 66, 277–285. <http://dx.doi.org/10.1016/j.jpsychores.2008.09.008>
- O'Connor, K. J., Schaefer, C. E., & Braverman, L. D. (Eds.). (2015). *Handbook of play therapy* (2nd ed.). Hoboken, NJ: Wiley. <http://dx.doi.org/10.1002/9781119140467>
- Ogden, C. L., Carroll, M. D., Fryar, C. D., & Flegal, K. M. (2015, November). *Prevalence of obesity among adults and youth: United States, 2011–2014* (Data Brief No. 219). Hyattsville, MD: National Center for Health Statistics.
- Parsons, J. A. (2015). Holistic mental health care and play therapy for hospitalized, chronically ill children. In E. J. Green & A. Myrick (Eds.), *Play therapy with vulnerable populations: No child forgotten* (pp. 125–138). Lanham, MD: Rowman & Littlefield.
- Pélicand, J., Gagnayre, R., Sandrin-Berthon, B., & Aujoulat, I. (2006). A therapeutic education programme for diabetic children: Recreational, creative methods, and use of puppets. *Patient Education and Counseling*, 60, 152–163. <http://dx.doi.org/10.1016/j.pec.2004.12.007>

- Petry, N. M., Barry, D., Pietrzak, R. H., & Wagner, J. A. (2008). Overweight and obesity are associated with psychiatric disorders: Results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Psychosomatic Medicine, 70*, 288–297. <http://dx.doi.org/10.1097/PSY.0b013e3181651651>
- Pless, I. B., & Douglas, J. W. (1971). Chronic illness in childhood: Part I. Epidemiological and clinical characteristics. *Pediatrics, 47*, 405–414.
- Pratt, K. J., Palmer, E. N., & Walker, M. D. (2015). Approaches to weight-related problems: A narrative intervention for overweight youth. *Journal of Family Psychotherapy, 26*, 19–24.
- Puhl, R., & Brownell, K. D. (2001). Bias, discrimination, and obesity. *Obesity Research, 9*, 788–805. <http://dx.doi.org/10.1038/oby.2001.108>
- Puhl, R. M., & Heuer, C. A. (2010). Obesity stigma: Important considerations for public health. *American Journal of Public Health, 100*, 1019–1028. <http://dx.doi.org/10.2105/AJPH.2009.159491>
- Puhl, R. M., & Latner, J. D. (2007). Stigma, obesity, and the health of the nation's children. *Psychological Bulletin, 133*, 557–580. <http://dx.doi.org/10.1037/0033-2909.133.4.557>
- Querido, J. G., Bearss, K., & Eyberg, S. M. (2002). Parent-child interaction therapy. In F. W. Kaslow & T. Patterson (Series Eds.), *Comprehensive handbook of psychotherapy: Vol. 2. Cognitive-behavioral approaches* (pp. 91–113). Hoboken, NJ: Wiley.
- Rogers, C. R. (1951). *Client-centered therapy: Its current practice, implications, and theory*. Boston, MA: Houghton Mifflin.
- Rolland, J. S., & Walsh, F. (2006). Facilitating family resilience with childhood illness and disability. *Current Opinion in Pediatrics, 18*, 527–538. <http://dx.doi.org/10.1097/01.mop.0000245354.83454.68>
- Russell-Mayhew, S., McVey, G., Bardick, A., & Ireland, A. (2012). Mental health, wellness, and childhood overweight/obesity. *Journal of Obesity, 2012*, 281801. <http://dx.doi.org/10.1155/2012/281801>
- Sahoo, K., Sahoo, B., Choudhury, A. K., Sofi, N. Y., Kumar, R., & Bhadoria, A. S. (2015). Childhood obesity: Causes and consequences. *Journal of Family Medicine and Primary Care, 4*, 187–192. <http://dx.doi.org/10.4103/2249-4863.154628>
- Satter, E. (2011). *Your child's weight: Helping without harming*. Madison, WI: Kelcy Press.
- Sharpe, D., & Rossiter, L. (2002). Siblings of children with a chronic illness: A meta-analysis. *Journal of Pediatric Psychology, 27*, 699–710.
- Skelton, J. A., Irby, M. B., & Geiger, A. M. (2014). A systematic review of satisfaction and pediatric obesity treatment: New avenues for addressing attrition. *Journal for Healthcare Quality, 36*, 5–22. <http://dx.doi.org/10.1111/jhq.12003>
- Stoner, L., & Cornwall, J. (2014). Did the American Medical Association make the correct decision classifying obesity as a disease? *The Australasian Medical Journal, 7*, 462–464. <http://dx.doi.org/10.4066/AMJ.2014.2281>
- Tew, K., Landreth, G. L., Joiner, K. D., & Solt, M. D. (2002). Filial therapy with parents of chronically ill children. *International Journal of Play Therapy, 11*, 79–100. <http://dx.doi.org/10.1037/h0088858>
- Van Cleave, J., Gortmaker, S. L., & Perrin, J. M. (2010). Dynamics of obesity and chronic health conditions among children and youth. *Journal of the American Medical Association, 303*, 623–630. <http://dx.doi.org/10.1001/jama.2010.104>
- van der Lee, J. H., Mokkink, L. B., Grootenhuys, M. A., Heymans, H. S., & Offringa, M. (2007). Definitions and measurement of chronic health conditions in childhood: A systematic review. *Journal of the American Medical Association, 297*, 2741–2751. <http://dx.doi.org/10.1001/jama.297.24.2741>
- Vickers, A. J., & Smith, C. (2000). Incorporating data from dissertations in systematic reviews. *International Journal of Technology Assessment in Health Care, 16*, 711–713. <http://dx.doi.org/10.1017/S0266462300101278>
- von Bertalanffy, L. V. (1968). *Organismic psychology and systems theory*. Worcester, MA: Clark University Press.
- Ware, L. M., McNeil, C. B., Masse, J., & Stevens, S. (2008). Efficacy of in-home parent-child interaction therapy. *Child & Family Behavior Therapy, 30*, 99–126. <http://dx.doi.org/10.1080/07317100802060302>
- Webb, N. B. (2011). *Social work practice with children*. New York, NY: Guilford Press.
- Williams, P. D. (1997). Siblings and pediatric chronic illness: A review of the literature. *International Journal of Nursing Studies, 34*, 312–323. [http://dx.doi.org/10.1016/S0020-7489\(97\)00019-9](http://dx.doi.org/10.1016/S0020-7489(97)00019-9)

Received July 25, 2016

Revision received December 29, 2016

Accepted January 3, 2017 ■