This article describes two studies that focused on parents’ expectations and satisfaction with occupational therapy intervention for their children \((N = 208)\). The first study determined the psychometric properties of the Parents as Partners in Intervention (PAPI) Questionnaire set \((n = 146)\). The 2nd study examined parental expectations, satisfaction, and perception of their child’s functional gains from individual- \((n = 30\) parents) and group- \((n = 32\) parents) based interventions. Overall, the results of these studies further support the PAPI Questionnaire set’s validity and reliability and suggest that parents’ expectations are high and not necessarily in line with their actual satisfaction with the outcomes of their child’s intervention and functional gains.


Over the past 30 years, Family-Centered Practice (FCP) has become a widespread treatment approach within the range of pediatric occupational therapy services. FCP emerged in the second half of the 20th century, in parallel with family therapy, a theoretical and practical model in the field of psychology and psychiatry (Elizor & Tyano, 2006). The fundamental conceptualization underlying FCP involves the acknowledgment of the family as the constant supportive component in the child’s life (National Center for Family-Centered Care, 1990). Moreover, FCP relies on the assumptions that parents want to achieve the best for their children, that each family is different and unique and shares varied cultural and moral perceptions, and that children develop best and thrive in the context of a supportive and caring family. In light of these premises, an alliance is established between occupational therapy practitioners and families throughout the intervention process, starting in the evaluation and decision-making phase (Case-Smith & Nastro, 1993; Rosenbaum, King, Law, King, & Evans, 1998). Such an alliance enables an efficient communication exchange with the family and allows the occupational therapy practitioner to identify the family’s strengths to promote the child’s growth (Lyons, O’Malley, O’Connor, & Monaghan, 2010).

Studies in the field of occupational therapy have demonstrated that addressing parents’ expectations of therapy and engaging them in their children’s intervention process have a direct effect on their satisfaction with therapy outcomes (Carrigan, Rodger, & Copley, 2001; King, King, & Rosenbaum, 1996). However, an examination of various outcome measures designed to assess parental satisfaction with medical services given to their children revealed that they do not address several important issues. These issues include parents’ expectations for and satisfaction with their child’s performance as well as their perceived engagement in the therapeutic process (Fingerhut, 2013; McPherson, Sachdeva, & Jefferson, 2000; Moumtzoglou et al., 2000; Yagge & Arnetz, 2001). Therefore, it is vital that an outcome measure with adequate psychometric properties be
developed to assess parents’ expectations of and satisfaction with occupational therapy intervention. Such a tool will enable clinicians to examine whether parents’ expectations of occupational therapy intervention conform with their perceptions of their involvement in the child’s therapeutic process, functional gains, and ultimately their satisfaction with the intervention. To support clinical decision making, assessment tools must demonstrate reliability and validity. Moreover, a clinically meaningful outcome measure must also manifest responsiveness, that is, it must be capable of measuring changes that are important to the client over the course of intervention (Beaton et al., 2001; Chen et al., 2015; Moran, 2016).

Expectations

Expectations are defined as a person’s beliefs that a certain behavior or outcome will occur as a result of a specific event (Fishbein & Ajzen, 1975; Kravitz, 1996). Thompson and Suñol (1995) claimed that clients’ expectations are influenced by both personal and social components related to health care services. The personal component can be described as a person’s set of needs, values, and desires as well as his or her capabilities and commitment to act on a desired goal. The social component includes a person’s sociodemographic characteristics, social demands that relate to the desired goal, and sense of justice. Additional factors may affect clients’ expectations of these services, and the most influential factor may stem from the specific nature of the relationship between a practitioner and a client (Kravitz, 1996).

A successful intervention should relate to the child’s and his or her family’s everyday functioning (Cohn, Miller, & Tickle-Degnen, 2000; Gerkensmeyer, Austin, & Miller, 2006). Cohn et al. (2000), in qualitative research of parents of children with sensory modulation disorders, examined the expectations and hopes parents had regarding the intervention delivered to their child. They found that parents’ expectations included two main elements: (1) expectations related to their child’s social functioning, self-modulation, and self-efficacy, which relate to parents’ desire that the intervention help their child fully integrate and participate in life despite his or her difficulties, and (2) expectations related to family life, such as learning new ways in which they can help their child and better understand his or her behavior.

Satisfaction

Satisfaction is defined as clients’ emotional responses to the gap between their wishes for and expectations of the intervention and their perception of what they actually received or gained from it (Gerkensmeyer et al., 2006), and it includes the structure, process, and results of the intervention. The term intervention structure refers to the actual setting in which the intervention is delivered: its availability and accessibility, the related administrative processes, frequency, duration, wait list, and costs (King, Cathers, King, & Rosenbaum, 2001). Intervention process refers to the actual delivery of the intervention and includes the practitioner’s professional and personal qualities, interpersonal relationships, respect, supportiveness, attentiveness, and collaboration with his or her clients. These factors have a significant effect on the results of the intervention with regard to the client’s health status and relevant functioning (Donabedian, 1988).

The literature presents several elements that relate to a client’s satisfaction: the client’s personality, life experience, education, and socioeconomic status (Hall & Dornan, 1988; Kane, Maciejewski, & Finch, 1997; Ware & Hays, 1988); the practitioner’s personality, professional and communicative capabilities, and willingness to help (Carrigan et al., 2001; Donabedian, 1988; Hall & Dornan, 1988); the nature of the client–practitioner relationship; and the type, availability, accessibility, and costs of the intervention provided (Carrigan et al., 2001; Kane et al., 1997; King et al., 2001). A supportive and respectful attitude, confidentiality, the sharing of information, provision of feedback, and collaborative decision making provide the basis for an optimal relationship (Carrigan et al., 2001; King et al., 1996).

Association Between Satisfaction and Expectations

Research has shown that the client’s expectations represent one of the central factors that relate to his or her satisfaction with the intervention (Linder-Pelz & Struening, 1985; McNaughton, 1994; Thompson & Suñol, 1995). Linder-Pelz and Struening found that clients who had positive expectations and perceived their intervention as a positive experience were significantly more satisfied than clients who had positive expectations and a negative experience. Locker and Dunt (1978) suggested that expectations might change as a result of the way clients perceive the intervention experience, which in turn influences their overall sense of satisfaction. Carrigan and colleagues (2001); King and colleagues (1996); and Ödman, Krevers, and Oberg (2007) determined that parents’ satisfaction was clearly influenced by addressing their expectations and conducting a collaborative intervention process between the parents and the intervening practitioner. Lyons and colleagues (2010) performed a qualitative study based on pre- and postintervention focus groups and discovered that...
parents expected their children to progress in relation to their functional difficulties and that they would receive guidance from the intervening practitioners.

Professional changes within the field of occupational therapy have significantly influenced the type and characteristics of service delivery (Cohn et al., 2000; Hinnojosa, Sproat, Mankherwit, & Anderson, 2002; Wilkins, Pollock, Rochon, & Law, 2001). Currently, pediatric practitioners lack a reliable and valid assessment that can be used to inform them about parents’ expectations of and satisfaction with occupational therapy services provided to their children (Wilkins et al., 2001). A set of three questionnaires was designed to elicit parents’ expectations of intervention before initiation and their satisfaction with the service during and after intervention (Nachum, 2009; Parush, Hirsch, & Waldman-Levi, 2005).

We conducted two separate studies with the shared purpose of establishing the psychometric properties of the Parents as Partners in Intervention (PAPI) Questionnaire set (Nachum, 2009; Parush et al., 2005). In both studies, we examined the potential relationships between parental expectations and satisfaction regarding their involvement in their child’s intervention process and their child’s functional gains.

Study 1

Method

Study 1 was a nonexperimental methodological study designed to examine the psychometric properties of an outcome measure, the PAPI Questionnaire set. The three study hypotheses were as follows:

1. The PAPI Questionnaire set will demonstrate a high level of internal consistency, thus supporting its reliability.
2. The results on the questionnaires will significantly correlate with those of the Canadian Occupational Performance Measure (COPM; Law et al., 2005), demonstrating their criterion validity.
3. Significant correlations will be found between parents’ expectations and satisfaction (as measured by the PAPI Questionnaires) throughout the course of the intervention, demonstrating their responsivity.

Participants. A sample of 146 parents was deemed sufficient based on the methodology of Miller, Polatajko, Missiuna, Mandich, and Macnab’s (2001) study, in which 122 participants were needed to achieve a power of 0.8 and significance level of .05. This convenience sample included children with mild developmental delays. Children with severe physical disabilities such as cerebral palsy and spina bifida and developmental syndromes such as autism and cognitive delays were excluded. Parents were recruited from a developmental center in Israel, where children were referred by teachers or by their parents for child-related services. The children’s age range was 2.11–8.10 yr (mean [M] = 5.70, standard deviation [SD] = 8.71), and 120 were boys (82.2%) and 26 were girls (17.8%). Ninety-six children (65.8%) received group-based intervention, and 47 (32.3%) received individual intervention. The type of intervention received was not reported for 3 participants (1.9%).

Measures. Three measures were administered to the participants: (1) a demographic questionnaire, (2) the COPM, and (3) the PAPI Questionnaire set. The demographic questionnaire developed for this study was used to collect demographic information such as parental education and occupation, religious orientation, and the child’s developmental history.

The COPM is an individualized, client-centered measure designed for use by occupational therapy practitioners to detect change in a client’s self-perception of occupational performance over time. It was designed for use as an outcome measure for clients with a variety of disabilities across all developmental stages. It has a semistructured interview format and a structured scoring method, and its administration requires approximately 20–40 min. The psychometric properties investigated include clinical utility, validity, and responsiveness. The COPM is appropriate for use among a wide array of client populations in a variety of different settings and has been found to be responsive to change.

The PAPI Questionnaire set comprises three questionnaires: (1) the Parents’ Expectations Questionnaire (PAPI–I), (2) the Parents’ Satisfaction During Intervention Questionnaire (PAPI–II), and (3) the Satisfaction Post-Intervention Questionnaire (PAPI–III). These questionnaires were developed by experienced pediatric occupational therapists from the Maccabi Child Developmental Center in Israel in collaboration with faculty members of the School of Occupational Therapy at Hebrew University. Each questionnaire consists of 18 items that relate to parents’ involvement in the intervention process and their perception of their child’s function, and each is composed of two composite indexes: (1) Child’s Function and (2) Parental Involvement. Responses are rated on a 5-point Likert scale. Face and content validity have been established by a table of specifications completed by 12 experienced pediatric occupational therapists.

Procedure. Permission for the study was attained from the Maccabi Health Services institutional review board.
Consenting parents of children receiving occupational therapy services between December 2003 and December 2004 in a community-based health center in central Israel were asked to complete the questionnaires. The children were the recipients of either individual- or group-based occupational therapy intervention. Both types of intervention delivery focused on learning and improving motor and cognitive skills, and social skills training was included in the group-based intervention. The study’s purposes and procedures were explained to the parents before they were asked to sign the consent form. At Time 1, parents completed the demographic questionnaire, the PAPI–I, and the COPM. At Time 2, the halfway point of the intervention process, parents were asked to complete the PAPI–II (after eight treatment sessions). At Time 3, during the final session, parents completed the PAPI–III and the COPM.

Statistical Analysis. The statistical analysis was carried out using IBM SPSS Statistics (Version 22; IBM Corp., Armonk, NY). The composite scores for Parental Involvement and Child’s Function were computed, after which the change in parental satisfaction (PAPI–III score – PAPI–II score) for the composites of Parental Involvement and Child’s Function was calculated. Mean scores for the Satisfaction and Function scales were calculated for each of the COPM questionnaires. The pre- and postintervention change in satisfaction and function was calculated by comparing the COPM scores at those two data points (PAPI–I, PAPI–II, and PAPI–III responsiveness). Descriptive statistics were conducted for the following demographic variables: age, gender, type of intervention, and all PAPI and COPM scores (i.e., PAPI–I, PAPI–II, and PAPI–III scores; COPM pre and post items, composites, and change scores).

Results

As presented in Table 1, the composite score for Child’s Function reached a higher α coefficient value than did that for Parental Involvement. This finding supports the homogeneity of the items within each of the composites, thus establishing the questionnaires’ construct validity.

A significant, positive, and moderate correlation was found between the PAPI–III (satisfaction at the end of the intervention) and the COPM difference score relating to changes in the Child’s Function composite (r = .43, p < .001, n = 83). A significant, positive, and moderate correlation was found between the PAPI–III (satisfaction at the end of the intervention) and the COPM difference score for changes in parents’ satisfaction (r = .45, p < .001, n = 84). These findings support the criterion validity of the PAPI Questionnaires. In addition, a significant difference was found between the total scores on Parents’ Satisfaction during (PAPI–II) and after (PAPI–III) intervention, t(56) = -2.08, p < .04, as well as in the composite score of Child’s Function, t(56) = -2.73, p < .01; see Table 2.

Significant, positive, and low correlations (r = .30, p < .05, n = 60) were found between the total scores on the PAPI–I, PAPI–II, and PAPI–III (r = .21, p < .05, n = 134). For the two composite indices, Parental Involvement and Child’s Function, no significant correlations were found among scores on the PAPI–I, PAPI–II, and PAPI–III. A significant, positive, and low correlation was found between composite scores on Child’s Function for the PAPI–I and the PAPI–III (r = .19, p < .05, n = 134). These findings are also suggestive of the tool’s responsiveness.

Study 2

Method

Study 2 was an exploratory intervention with a pretest–posttest study design in which we examined the psychometric properties of the PAPI Questionnaires as reflected by parents’ perceptions of the individual- and group-based interventions their child received. Specifically, we

| Table 1. Homogeneity Between the Items in Each Parents as Partners in Intervention (PAPI) Questionnaire |
|---------------------------------|--------|----------|
| PAPI Questionnaire              | n      | α        |
| PAPI–I                          |        |          |
| Parental Involvement            | 107    | 0.62     |
| Child’s Function                | 93     | 0.67     |
| PAPI–II                         |        |          |
| Parental Involvement            | 48     | 0.58     |
| Child’s Function                | 25     | 0.82     |
| PAPI–III                        |        |          |
| Parental Involvement            | 123    | 0.48     |
| Child’s Function                | 69     | 0.80     |

| Table 2. Differences in Parental Satisfaction in Relation to Parental Involvement and Child’s Function |
|---------------------------------|--------|-----------------|----------|
| PAPI Questionnaire              |        | M               | SD       | df   | t    | p       |
| Total score                     |        | 4.77            | 0.56     | 56   | -2.08 | .04     |
| PAPI–II                         |        | 4.90            | 0.51     | 56   | -2.08 | .04     |
| PAPI–III                        |        | 5.12            | 0.51     | 56   | -0.70 | .49     |
| Parental Involvement            |        | 5.16            | 0.46     | 56   | -2.73 | .01     |
| Child’s Function                |        | 4.43            | 0.69     | 56   |       |        |
| PAPI–II                         |        | 4.66            | 0.66     | 56   |       |        |
| PAPI–III                        |        | 4.66            | 0.66     | 56   |       |        |

Note. df = degree of freedom; M = mean; PAPI = Parents as Partners in Intervention; SD = standard deviation.
investigated parents’ perception of individual- and group-based interventions as manifested by correlations between their perceptions of their child’s functional gains and their level of satisfaction.

Participants. Participants included 30 parents whose children received individual occupational therapy intervention and 32 parents whose children received group-based occupational therapy intervention. The inclusion criteria for both groups were parents of children who had mild developmental delay. The ages of the children in the individual intervention group ranged from 4.0 to 6.4 yr (M = 63.7 mo or 5.3 yr, SD = 6.9 mo). Participants included 26 boys (86.7%) and 4 girls (13.3%). The group that comprised children receiving group intervention ranged in age from 5.0 to 6.5 yr (M = 72 mo or 6.0 yr, SD = 4.5 mo), of whom 20 were boys (64.5%) and 11 were girls (35.5%).

Measures. Three measures were administered to participants: (1) a demographics questionnaire (2) the Child’s Function Questionnaires and (3) the PAPI Questionnaire set. A demographic questionnaire was developed for the purpose of this study. It was used to collect demographic information such as parental education and occupation, religious orientation, and the child’s developmental history. The Child’s Function Questionnaires are based on the same items and response scale as the PAPI–I, PAPI–II, and PAPI–III, but they focus on the parents’ perception of their child’s function pre- and postintervention. The PAPI Questionnaires were described earlier.

Procedure. Permission was obtained from the Clalit Health Services institutional review board. The consenting parents were recruited during 2009–2012 from the occupational therapy clinic at the Clalit Developmental Health center in central north Israel.

Individual-based intervention included 18–20 sessions, each 45 min long, focusing on improving the children’s function in the following four areas: (1) preacademic skills, including fine motor preschool-related activities, and metacognitive-related skills; (2) social skills related to both academic and social settings; (3) activities of daily living and instrumental activities of daily living; and (4) play in both academic and social settings. Group-based intervention included 9 sessions, each 90 min long, focusing on academic skills for first graders in the following two areas: (1) cognitive–organizational skills and (2) social skills in the academic setting.

Statistical Analysis. The statistical analysis was carried out using IBM SPSS Statistics (Version 22; IBM Corp., Armonk, NY). First, composite scores were calculated for Parental Involvement and Child’s Function for each of the PAPI Questionnaires. Then we calculated descriptive and parametric statistics using Pearson correlation coefficients and paired-sample t tests.

Results

Individual Intervention. Significant, positive, and moderate correlations were found between the Child’s Function Questionnaires postintervention and the PAPI–II (r = .38, p < .05, n = 30) and the PAPI–III (r = .62, p < .01, n = 30). The PAPI–II and PAPI–III were also significantly correlated (r = .43, p < .05, n = 30).

Significant correlations were revealed in composite scores on each of the PAPI Questionnaires and the Child’s Function Questionnaires. The Parental Involvement composite of the PAPI–II and the Child’s Function preintervention scores were significantly correlated (r = .37, p < .05, n = 30). In addition, the Parental Involvement composite of the PAPI–III correlated significantly with the Child’s Function postintervention scores (r = .41, p < .05, n = 30). The Child’s Function composite of the PAPI–II and the Child’s Function preintervention scores were significantly correlated (r = .38, p < .05, n = 30). Similarly, a significant correlation was revealed between the Child’s Function composite of the PAPI–III and the Child’s Function postintervention scores (r = .57, p < .001, n = 30). Significant preintervention–postintervention differences were found for Child’s Function, t(29) = −4.01, p < .001, and for parents’ satisfaction, t(29) = −2.17, p < .05, indicating that parents of children receiving individual occupational therapy intervention felt satisfied with their involvement in their children’s intervention and with their child’s progress, both during and at the end of the intervention process.

Group-Based Intervention. A significant correlation was found between the Child’s Function Questionnaires postintervention and the PAPI–III (r = .67, p < .01, n = 32). An examination of the composite scores on each of the PAPI Questionnaires and the Child’s Function Questionnaires revealed only one significant correlation, specifically, between the composite of Child’s Function in the PAPI–III and the Child’s Function postintervention rating (r = .67, p < .001, n = 32). A significant difference was found in Child’s Function from pre- to postintervention, t(31) = −3.04, p < .05, indicating that the parents of these children did not feel engaged in the intervention process but were satisfied with their child’s functional improvement on its completion.

Discussion

Studies within the field of occupational therapy have demonstrated that addressing parents’ expectations and
engaging them in the intervention process have a direct effect on their satisfaction with the intervention (Carrigan et al., 2001; King et al., 1996). Thus, the purpose of the current study was twofold: (1) to establish the psychometric properties of the PAPI Questionnaires, which were designed to assess both parental expectations and satisfaction with occupational therapy intervention for their child, and (2) to further examine parents’ perceptions of their involvement in occupational therapy interventions and their satisfaction with their child’s functional gains from both individual and group-based intervention.

According to findings of Study 1, the PAPI–I, PAPI–II, and PAPI–III have moderate internal coefficients, such that the Parental Involvement composites revealed relatively lower coefficient values. Similar to the principles of the FCP (Committee on Hospital Care, American Academy of Pediatrics, 2003), and the findings of studies conducted by Rey, Plapp, and Simpson (1999) and Cohn et al. (2000), parental perceptions of involvement include various items that reflect specific and crucial characteristics of parental engagement as opposed to global items (Edwards, Millard, Praskac, & Wisniewski, 2003; Rosenbaum et al., 1998). Significant correlations were found between the Child’s Function composite and the COPM’s Change in Function and Change in Satisfaction composites. This finding reflects the shared commonalities between these two client-centered questionnaires, thus supporting the criterion validity of the PAPI Questionnaires. The PAPI–I, PAPI–II, and PAPI–III detected a change (scale sensitivity or responsiveness) in parents’ satisfaction at the midpoint and completion of the intervention process, supporting their use as outcome measures. In summary, the current study’s findings are in line with those of previous studies, further suggesting that addressing parents’ expectations of intervention and enabling them to participate in the selection of treatment goals contribute to parental satisfaction (Carrigan et al., 2001; Cohn, 2001; Cohn et al., 2000; McKinnon, 2000; Sterrett, Jones, Zalot, & Shook, 2010).

Study 2 revealed that parents felt satisfied by their involvement and their child’s progress, both during and at the end of the individual-based intervention process. However, parents’ perceptions of group-based occupational therapy intervention showed that they did not feel engaged but were satisfied with their child’s functional gains on its completion. Of interest is that we did not find any associations between parents’ expectations and satisfaction in either of the interventions. Locker and Dunt (1978) suggested that expectations may change as a result of the perceived experience of the intervention and thus may affect clients’ overall sense of satisfaction. In our studies, parents reportedly felt satisfied with their child’s functional gains, which may reflect that their expectations were met (Lyons et al., 2010). Nevertheless, one should consider that the group-based intervention did not fully engage parents in the intervention process because a collaborative alliance with them was not attained. Our findings support the fundamental principles underlying FCP, which call for occupational therapy practitioners to establish a dialogue with parents, whether in individual or group-based interventions (Odman et al., 2007). By creating such a dialogue, practitioners can determine the nature of parents’ expectations, experiences, and concerns regarding their child’s development and their participation in meaningful environments.

Limitations and Further Research

Limitations of our studies include the lack of randomized sampling and of matching children’s ages between groups. In addition, the data from Study 1 were collected across interventions of various lengths, so some of questionnaires were not completed because of participant dropouts. Also, the PAPI–II at Time 2 was not administered to children who received a short-term intervention of <10 sessions, resulting in a smaller sample size for this specific questionnaire. As a result, the statistical analyses were carried out for a range of sample sizes, some of which were small. Furthermore, the parental perceptions of involvement portion of each of the PAPI Questionnaires includes various items that may have compromised the consistency of this composite. Thus, our findings should be interpreted with caution. Future research should include a larger sample size and children from various diagnostic groups.

Implications for Occupational Therapy Practice

The findings from these studies have the following potential implications for occupational therapy practice:

- Occupational therapists who work with children and parents should use a family-based perspective to provide sensitive and optimal care by guiding practice and generating goals that are meaningful to parents and their children.

- The PAPI Questionnaires (I, II, and III) appear to be tools that practitioners can use to better understand parents’ expectations and satisfaction during intervention as well as to measure occupational outcomes of intervention. The assessment of parents’ expectations can help establish a collaborative parent–practitioner partnership, build feelings of trust and rapport, and prompt reflective discussions beyond the scope of the child’s concrete
therapy goals. Moreover, the assessment of parents’ satisfaction with the child’s functional gains can serve as an outcome measure that can be incorporated into progress and summary reports, used for reimbursement purposes, and provide evidence for aspects of best practice. Last, an open discussion of parents’ satisfaction can facilitate closure for the established partnership as the intervention draws toward completion.

Acknowledgments
Helsinki committees approved both the first (2007034) and second (0104-08) studies. We owe a great debt of gratitude to the occupational therapists who were involved in each of these studies: Hanna Jakobovits, Idit Dahan, Ora Nachmany, Liraz Infeld, Michal Israeli, Renana Reindorp, Iris Ben-Sira, and Limor Yanuv from the Maccabi Child Developmental Center, Jerusalem, Israel, and Niza Gavan from the Clalit Child Developmental Center, Netanya, Israel.

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