



In the Eye of the Beholder: Visualizing Strengths, Burdens and Desires Through the Lens of Neurodivergent Children, Their Parents, and Professionals Using the Yucel Method

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Abstract

Objectives In mental healthcare, there is a growing emphasis on one's strengths and context instead of focusing primarily on individual deficiencies, pathologies, risks, and negative emotions. Using the visual and tactile Yucel method, this study gains insight into strengths, burdens, and desires of neurodivergent children in residential care and their parents from different perspectives.

Methods In this qualitative study, a total of 45 interviews with the Yucel method were conducted with nine neurodivergent children, their parents, and involved professionals. All built a constellation of the child and family's strengths, burdens, and desires using the Yucel method. To explore if by applying this visual and tactile method additional information is provided to that gathered in the standard diagnostic process, the information of the Yucel method was compared to the information found in the multidisciplinary reports of the children.

Results Thematic analysis showed that besides common mentioned strengths (e.g., mother, sports and activities) and burdens (mental health problems), differences in the informants' perspectives were found. Parents mentioned strengths and burdens that were not addressed by other informants and a diversity in needs was found. The comparison of the results from the interviews with the Yucel method with the information in the multidisciplinary reports showed that the Yucel method provided additional information.

Conclusions The Yucel method brought more strengths and perspectives into view than diagnostics as usual in the first three months of residential care. This study contributes to the knowledge regarding personal, strength-based, and family-oriented diagnostics in mental healthcare of neurodivergent children and their families.

Keywords Neurodivergence · Children · Parents · Strengths · Yucel method

Modern healthcare is shifting from traditional disease-oriented care to patient and family-centered care (Bokhour et al., 2018; Jayadevappa & Chhatre, 2011). By focusing on the needs, desires, preferences, and experiences of the patients and their families, these relatively new patient- and

family-centered care models enable them to take an active and independent role in managing their illness (Alemayehu, 2019). Furthermore, rather than concentrating primarily on deficiencies, pathologies, risks, and negative emotions, there is a growing emphasis on the patient's resilience, strengths, resources, and hope (Sams et al., 2016; Schlechter et al., 2019; Stancliffe et al., 2020; Xie, 2013). Traditional medical models view differences of the normative standard—that is what considered typical functioning within the population—as deficits that need to be fixed. However, focusing on someone's deficits rather than their unique experiences and strengths can be stigmatizing and can impact various aspects of their personal and social wellbeing (Chapman, 2020). This issue is illustrated by a Dutch professor in innovation in mental healthcare, who writes that “if we separate the extremes of the curve from the rest and call them

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disorders, we are left with the middle. This gives the impression that only the middle is normal and that the extremes of the curve are abnormal. But the middle is just as normal as the extremes, it is just more common and therefore closer to the norm (...). ‘You are not normal’ feels like a rejection as a human being” (Scheepers, 2021). So neurological differences can be viewed as an inherent and valuable part of the range of human diversity, rather than a pathological form of difference (Dyck & Russell, 2020).

In current science and practice regarding diagnostics and treatment, there is a growing realization that a categorical way of thinking about mental health problems has its limitations. There is a need for a more dimensional and person-centered approach, one that considers each person’s unique needs regardless of clinical assumptions resulting from a diagnosis (Márquez-Caraveo et al., 2021; Scheepers, 2021; Van Amelsvoort et al., 2018). Moreover, mental health problems involve dynamic processes that can change at the microlevel (from moments to days) and macrolevel (from months to years) (Van Amelsvoort et al., 2018; Wichers et al., 2015).

The neurodiversity movement is an upcoming alternative for medical models on atypical development. Neurodivergence describes individuals whose neurocognitive functioning falls outside prevalent societal norms (Shah et al., 2022). It is aligned with social theories rather than a classification system like the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association, 2013). Neurodivergence emphasizes acceptance and inclusivity and promotes the idea that society should accommodate different ways of functioning instead of expecting individuals to conform to a normative standard (Armstrong, 2015; Chapman, 2020). In this study, we use the term neurodivergent to refer to children with limitations in neurocognitive functioning, such as cognitive, behavioral, language, and/or motor impairments.

Personal Values and Perspectives in Recovery Require a Multidimensional Approach

Neurodivergent children are more likely to experience mental health problems that can affect their functioning and quality of life compared to neurotypical developing peers (Heslon et al., 2024). Mental health problems are the result of complex interactions between social, psychological, and (neuro)biological influences, underlining the importance that personal values and perspectives are central in recovery and that an individual is seen within the broader context of functioning, family, and environment (Ekblad, 2013; Gardiner et al., 2020; Köhne & van Os, 2021; Van der Stel, 2020; Wehmeyer, 2013). Van Os (2018) introduced a new

perspective on personal diagnostics in which the healthcare user actively participates and is met with a modest, questioning-interested attitude, based on four questions: what have you been through, what are your weak and strong points, where do you want to go, what do you need to get there? A transdiagnostic approach may better serve our understanding of underlying biopsychological mechanisms in neurocognitive impairments and subsequent care needs (Astle et al., 2021).

As the health of the child and the health of parents are interconnected, the presence or absence of both their adversities and strengths are an important source of information to enhance intervention strategies (Barnová & Tamášová, 2018; D’Souza & Karmiloff-Smith, 2017; Ungar, 2015). This implies that the personal life stories of both children and their families are an important source of information for recovery during mental healthcare trajectories. Outcomes of mental healthcare trajectories are influenced by the professional and organizational context as well (Davis et al., 2021; Knotter, 2019; Olivier-Pijpers et al., 2019), as therapeutic relationships have an important contribution to positive treatment outcomes (Köhne & van Os, 2021). This holistic approach reveals that characteristics, experiences, skills, and perspectives of all persons involved with the healthcare user and their joint investment in the alliance count (Baier et al., 2020; De Greef et al., 2019). Given the complexity of these interactions, diagnostic assessment in mental healthcare requires a multidimensional approach (Lerner, 2006).

The Yucel Method: a Person Centered and Multidimensional Approach

Language plays an important role when conducting multidimensional diagnostic assessment. It is a key component in communicating about someone’s experiences, thoughts, and feelings and what they all mean to the person in question (Van der Stel, 2020). Neurodivergence is characterized by difficulties in (social) communication and interaction across contexts and by limitations in executive functions (Ahn & Hwang, 2018; Otterman et al., 2019). These difficulties can impede someone’s ability to communicate about needs, desires, preferences, and experiences. To enhance adequate mental healthcare for neurodivergent children, an open and flexible approach and appropriate diagnostic tools that facilitate voice are needed (Carroll & Twomey, 2020). Therefore, the current study uses the visual and tactile Yucel method to gain insight into their and their family’s experienced strengths, burdens, and desires.

The Yucel method is a therapeutic procedure in which a person’s experienced strengths, burdens, and desires are visualized in a constellation of building blocks (Psychosis Net, n.d.; Yucel, 2022). This constellation is used for reflection

on the current and desired life situation of the builder (Yucel, 2022). The Yucel method is developed in The Netherlands (Yucel, 2022). Working with the Yucel method enables people to actively participate in their recovery process and actively explore their personal strengths, burdens, and desires as well as those of their (family) network. With colored blocks, visual representations of one's current and desired life situation are built. This includes strengths that can support and burdens that can hinder one's life situation. The supporting professional discusses the emerging insights with the person who builds the constellation. The idea is that this way of working makes problems and solutions for recovery more clear, concrete, and visible (for further information see the "Materials and Methods" section).

To date, no scientific research has been conducted on the Yucel method. Yet, research has demonstrated that multimodal and multisensory ways of communication, including tactile and visual cues, are commonly used in neurodivergent people to facilitate their voice (Garzotto et al., 2019; Matos et al., 2015; Ten Brug et al., 2012). Tactile aid is found to increase the level of participation and activity in neurodivergent children (Aasen & Nærland, 2014). Visual aid may increase the quality of reasoning that supports a decision (Bailey et al., 2011), task completion (Cohen & Demchak, 2018), learning processes (Sperotto, 2016), and enhancement and extension of language abilities and communication (Arthur-Kelly et al., 2009; Niemiec et al., 2017). From this perspective, neurodivergent children may benefit from visual and tactile support in sharing their thoughts and emotions regarding experienced strengths, burdens, and needs in life.

Objective

This qualitative study aims to investigate to what extent a multidimensional assessment with the Yucel method gives insight into experienced strengths, burdens, and desires of neurodivergent children in residential care and of their parents. The Yucel method is used, given the assumed benefits of visual and tactile support for these children and the importance of the central place of the child and its family in mental healthcare trajectories. An assessment with the Yucel method will be conducted separately with both the child, its parents or legal caregivers, and the involved behavioral scientist, family therapist, and group home worker. All

are asked to build a constellation of their perspective on strengths, burdens, and desires of the child and family. To explore if by applying this method additional information is provided to that gathered in the standard diagnostic process, the information of the Yucel method will be compared to the information in the multidisciplinary reports of the children. The following research questions will be answered: 1) What are the perspectives of neurodivergent children, their parents, and the professionals involved on child and family strengths, burdens, and desires? 2) Does the Yucel method provide new information regarding strengths, burdens, and desires of children and their families compared to the information gathered in a standard diagnostic process?

Materials and Methods

This qualitative study was conducted in a Dutch residential care center for children with impairments in cognitive, behavioral, language, and/or motor functioning and who have severe, persistent, and complex mental health problems. The study was approved by the Ethics Review Board of the University of Amsterdam (2018CDE887).

Participants

Participants were recruited in a residential youth care center in The Netherlands. This center provides specialized clinical observation, diagnostics, and treatment for neurodivergent children. All children have impairments in cognitive, behavioral, language, and/or motor functioning and have severe, persistent, and complex mental health problems. During the first 10 weeks of residential care, a standard multidisciplinary diagnostic assessment procedure is conducted. Convenience sampling was used between March and April, 2019, to include participants. Children who were admitted in this period and their parent(s)/legal caregiver(s) (hereafter, parents) were approached to participate in this study. The coordinating behavioral scientists selected the children based on the following criteria: (1) The child was between 5 and 16 years old (see Table 1), (2) the child was in the first phase of admission in residential care, and (3) participation would not interfere with their mental healthcare trajectory or wellbeing. When children and parents were willing to participate, an informed consent letter was provided to the

Table 1 Demographics of the participating children

Variable	Children								
	1	2	3	4	5	6	7	8	9
Gender	F	M	M	M	M	M	M	M	F
Age	10	15	9	16	12	9	11	12	11

F, female; *M*, male

child and the parent which was signed prior to the interview. These letters were written in “language for all,” a method that makes information accessible and understandable to all people with and without reading difficulties (Moonen, 2021). Nine children, at least one of their parents, and their involved behavioral scientist, family therapist, and group home worker participated in the study, adding up to 45 interviews. Data were missing from one child as he/she did not agree to record the interview. Also data were missing from one behavioral scientist as there were technical problems with the recording device. The interviews took place from May to August, 2019.

Measures

Two measures were used to gain insight into the strengths, burdens, and desires of children and their families:

- (1) *Interviews with the child, (one of) its parents and the three involved professionals using the Yucel method:* providing insight into the perspectives of the informants on child and family strengths, burdens, and desires (research question 1).
- (2) *Diagnostic information as found in the multidisciplinary reports of the first three months of residential care:* the information in the reports concerning strengths, burdens, and desires of the participating children and their families was compared to the information resulting from applying the Yucel method, giving insight into additional information that the Yucel method may provide (research question 2).

The Yucel Method

As described in the introduction, the Yucel method is a therapeutic procedure in which a person’s experienced strengths, burdens, and desires are visualized in a constellation of building blocks which is used for reflection on the current and desired life situation of the builder (Yucel, 2022). Personal strengths, burdens, and desires can be explored, as well as those of their (family) network. Working with the Yucel method enables people to actively participate in their recovery process. With colored blocks, visual representations of one’s current and desired life situation are built. This includes strengths that can support and burdens that can hinder one’s life situation. The Yucel method is typically applied in an interview format in which the supporting interviewer (usually a professional who has been trained to work with the Yucel method) has a curious, supporting, and non-directive attitude. The interviewer starts with a short introduction and instruction, after which the interviewer hands over a box with blocks to the participant to emphasize the participant’s agency during the conversation (Yucel,

2022). The materials used to build the constellation include 1. four differently shaped bars, visualizing the participant and/or family network or a situation; 2. T-shaped blocks in different colors visualizing strengths and resources; and 3. rectangular blocks in different sizes and colors visualizing burdens or stressful factors; see Fig. 1.

The T-shaped blocks can be placed under the bar to represent the strengths. The rectangular blocks, in three different sizes, can be placed upon the bar, representing burdens that weigh on the participant’s or family’s situation. The participant is free to organize the blocks in other ways if desired. The colors of the blocks may also have a specific meaning for the participant, but this modus was not applied in the current study. To assist the participant in generating strengths, burdens, and desires, the interviewer can ask questions as defined in the instructions of the Yucel method. These are so called “green questions” in which possibilities, support factors, and strengths are addressed and “red questions” addressing barriers and burdens in the lives of the children and their families. As part of the multidimensional approach of the Yucel method, these questions relate to personal, family, and contextual strengths, burdens, and desires. Contextual strengths, burdens, and desires concern factors outside the family, for example, in the social network or physical environment of the builder. In this study, and conform the method, participants were asked to build two constellations: one representing the current situation and one representing the desired situation. Desires mainly emerge from the second constellation by asking participants how the desired life situation of the child and family would look like. When finished, the constellations are photographed and photos are shared with the participants. The photos can be

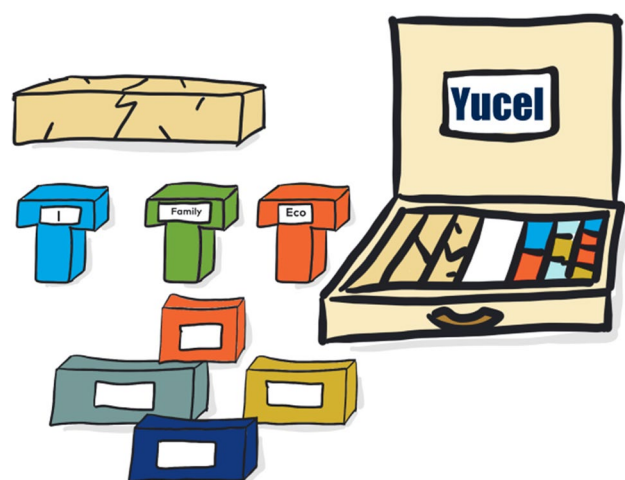


Fig. 1 The materials used to build a constellation, including bars (the participant or a situation), T-blocks (strengths), and rectangular blocks (burdens)

used as reminders, starting points for follow-up sessions and to reflect on changes that may have occurred over time.

Multidisciplinary Report

All children receiving care at the residential care center have a digital case file, in which the multidisciplinary report of the observational and diagnostic assessment phase is included. In this report the observations and findings of the disciplines involved (e.g., group home workers, therapists, medical staff, psychologists, and behavioral scientists) are summarized. These multidisciplinary reports were analyzed by the researchers with respect to information concerning strengths, burdens, and desires of the participating children and their families.

Procedure

In cooperation with the developers of the Yucel method, the researchers adapted the original instructions for the interview with the Yucel method in accordance with the guidelines posed by “language for all” (Moonen, 2021). Also, while setting up the study, the researchers cooperated with an advisory board of professionals in practice to ensure clinical relevance. To assure that the Yucel method did not interfere with the regular processes of the 10-week observational phase of the residential care center, the interview took place after the multidisciplinary care meeting which completed this phase after three months. Interviewers were certified Yucel method users. The interviewers had no prior knowledge of the child and family backgrounds and reasons for admission of the children in order to minimize bias. The interviews with the Yucel method took place in an assessment room of the residential care center. For parents, the interview could also take place at home if they were not able to travel to the location. Every participant was asked to build two constellations

following the steps as described in the previous paragraph on the Yucel method. One important adaption in light of the research questions was made. Normally the builder chooses the theme of the bar. In our study the bar represented the child in the context of its family and network, as the current study aimed to gain insight into child and family strengths, burdens, and desires in this network (see Fig. 2). By the so-called “green” and “red questions,” the informants were asked about personal, family, and contextual strengths, burdens, and desires of the child in the context of its family and network. The children and parents were free to decide whether they wanted to share the photo of their constellations with the involved professionals for the benefit of their care trajectory. As a result of the participant’s agency to decide when a constellation was finished, the duration of the interviews varied from approximately half an hour to one and a half hour. The interviews were transcribed and anonymized and the photographs of both constellations (the current situation and the desired situation) were anonymized for the purpose of analysis. Strengths and burdens were derived from the information of the current situation; desires were derived from the information of the desired situation. The analysis of the multidisciplinary report in the case files of the children took place after the interview with the Yucel method. This analysis was conducted by researchers one and two without further involvement of the participants via access to the electronic patient database. Information in the multidisciplinary report was anonymized before analysis.

Data Analysis

The data derived from the Yucel interview were 1. verbally expressed strengths, burdens, and desires by the participants; 2. strengths, burdens, and desires derived from the photographs of the constellations. Both the conversation (interview) and the constellation are part of the Yucel method

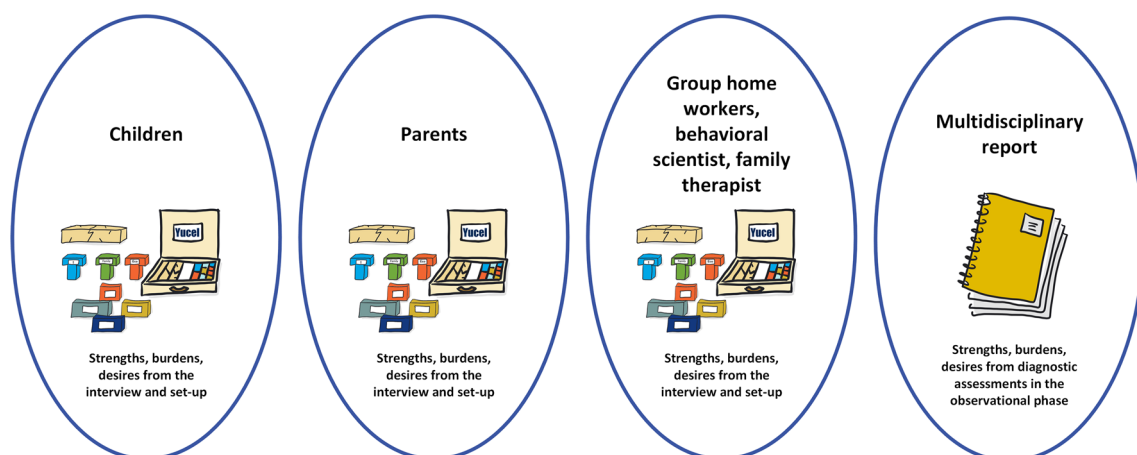


Fig. 2 Overview of the information sources to identify strengths, burdens, and desires

and were used in the analysis. These sources were complementary, given that not all verbal expressed strengths, burdens, and desires ended up in the constellation. For each participant the strengths, burdens, and desires derived from the interview and the photograph of the constellation were corrected for duplicates to determine the total number of unique strength, burden, and desire dimensions mentioned per participant. Data from the multidisciplinary reports in de case files was information regarding strengths, burdens, and desires of the child, family in the context of their network.

Data were analyzed qualitatively using the software programme Atlas.ti 8 for Windows. A coding system was created based on the theoretical starting point of the Yucel method. Core labels named “strengths,” “burdens,” and “desires” were added to the relevant data fragments in the interviews, photographs, and information in the multidisciplinary report. Twenty percent of the data of every informant group (children, parents, behavioral scientist, family therapist, group home worker, and the multidisciplinary reports) was coded by researchers one and two. The first researcher allocated dimensions to the core labels. These dimensions specified the type of strengths, burdens, and desires (see Fig. 3). By means of a process of induction and deduction between the core labels, dimensions, and fragments, for every informant group a code tree was generated. In allocating dimensions, the researchers stayed as close as possible to the language of the participants, aiming at representing the informant’s perspective in the code trees as much as possible. Every emerged code tree was discussed with the second researcher, after which the second researcher independently allocated the dimensions to 20% of the data of the informant group as well. Cohen’s kappa was calculated per informant group to investigate to what extent the allocated dimensions corresponded. Overall the level of agreement was moderate to almost perfect (0.59–0.91), with one weak agreement for the informant group children (Landis & Koch, 1977). By framework analysis the code trees of the different informant groups

were compared based on the dimensions of strengths, burdens, and desires (Gale et al., 2013). These results are presented in the result section by informant group. Given the large number of strength, burden, and desire dimensions in the multidisciplinary reports, only dimensions that were present in at least five case files were compared with the Yucel data.

Results

Identified Strengths, Burdens, and Desires in the Interview with the Yucel Method

For each participant the strength, burden, and desire dimensions that were identified from the interview and from the photograph of the constellation were corrected for duplicates to determine the number of cases (of a total of nine) in which these dimensions were reported. By comparing these dimensions between the informant groups, perspectives were explored. In this paragraph these differences and commonalities are presented by strengths, burdens, and dimensions.

Strengths

In Table 2 the dimensions of strengths as reported by the different informants are presented (in brackets the number of cases). Children and parents mentioned a greater variety of strengths compared to the behavioral scientists, family therapists, and group home workers. Common themes between informant groups were found, among which activities. Many children reported “indoor activities” and “sport and exercise”, all parents reported “doing something relaxing and fun,” and behavioral scientists and family therapists reported “leisure activities.” Mental healthcare was a common theme as well, as the dimensions “healthcare providers” and “mental healthcare organization” were present among all informant groups. Characteristics of the child as a strength were reported by children (“being good at something”) and by parents and group home workers (“traits of the child”). Also, multiple dimensions were related to the family, in which mother was particularly mentioned as a strength in all informant groups.

In addition to these common themes, other dimensions were only reported by one group of informants such as “being at home” and “peers in residential care” (children), “long-lasting relationships,” “traits of parent(s),” “strength to carry on”, “financial situation,” “no substance use,” “future” (parents), “positive family climate” (all three informant groups of professionals), and “music” and “coping” (group home workers). Parents reported the most strength dimensions regarding family

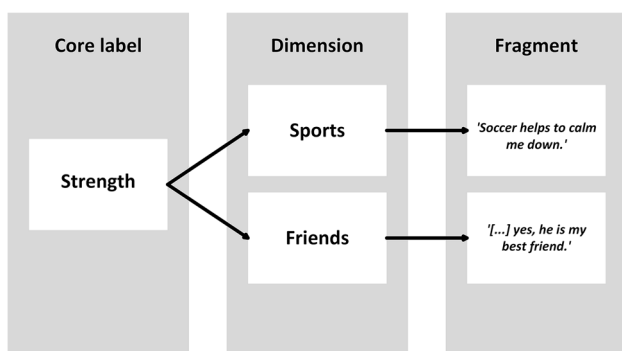


Fig. 3 A schematic representation of the coding process

Table 2 Dimensions regarding child and family strengths as reported by the different informants and the number of cases in which they were reported

Strengths	
Children	Indoor activities (7), care providers at the residential care center (6), sport and exercise (6), mother (6), being good at something (6), brothers and sisters (5), being at home (5), family (4), peers in residential youth care (4), pets (3), former healthcare provider (3), grandparents (3), activities to calm down (3), personal characteristics (3), school (3), support from family (3), support from someone outside family (3), father (3), friends (3), medication (2), stepparents (2), parents (2)
Parents	Traits of the parents (9), strength to carry on (9), healthcare (professionals) (9), parent-child interaction (9), support from family (9), doing something relaxing and fun (9), family interaction (8), love within the family (7), support from friends (7), obtained insights from healthcare (6), understanding the child (6), mother (6), residential care setting (6), self-protection (5), experiencing and regulating emotions (5), family structure (5), accepting help (5), clarity of diagnosis (5), grandmother (5), work (5), traits of the child (4), autonomy (4), relationships (4), development/growth within family (4), school (4), meeting basic needs (4), social network (3), father (3), financial situation (2), pets (2), practical support (2), social connectedness (2), future (2), few problems (2), living environment (2), period of infancy (1), neighbors (1), no substance use (1), partner of parent (1), medication (1), emotional support (1)
Behavioral scientists	Mother (6), brothers and sisters (6), leisure activities (6), healthcare (professionals) (6), positive family climate (5), father (4), absence intellectual disabilities (3), grandparents (3), stepparents (2)
Family therapists	Healthcare (professionals) (7), leisure activities (7), support from friends and family (6), positive family climate (6), mother (5), grandparents (5), father (5), strength to carry on (4), brothers and sisters (2), absence of intellectual disabilities (1)
Group home workers	Mother (7), traits of the child (6), brothers and sisters (5), coping (5), healthcare (professionals) (4), grandparents (4), parents (4), school and internships (4), sport and exercise (4), father (4), family climate (3), pets (3), music (3), positive experiences (2), cognition (1), network (1), many sources of strength (1), changing name (1), living environment (1)

dynamics that were not mentioned by the other informants, such as “parent-child interaction,” “family interaction,” “understanding the child,” “love within the family,” “family structure,” and “development/growth within family.”

Burdens

In Table 3 the dimensions of child and family burdens as reported by the different informants are shown (in brackets the number of cases). Common themes between informant

Table 3 Dimensions regarding child and family burdens as reported by the different informants and the number of cases in which they were reported

Burdens	
Children	Behavioral problems (7), being at the residential care center (6), problems at home (5), school (4), negative feelings (3), conflicts with other children (3), former healthcare provider (3), physical health (3), poor relationship with caregiver (3), current healthcare (professionals) (3), autism (2), lack of support figure (2), medication (1)
Parents	Problems of the child (diagnosis, disabilities) (9), traits parents (8), healthcare organizations (8), continuing burdens (8), worrying about the future (8), adjusting to the child (7), burdens in social network (7), family functioning (7), the past and thinking about it (7), limited strength capacity within the family (6), parent-child interaction (6), (mental health) problems of family members (6), emotions (6), missing family connectedness (6), aggression and threat to feelings of safety (5), limited (support) social network (6), family structure (5), limited relaxation or leisure time (5), work (5), financial situation (4), school (4), physical health (4), misunderstanding (4), feelings of guilt (4), residential care placement (4), parents (3), housekeeping (2), crisis (2), physical distance (2), living environment (2), period of infancy (2), administration (1), pets (1), difficulty asking for help (1)
Behavioral scientists	Mental health problems, disabilities or disorders child (8), conflicts in the family (7), family members with mental health problems (5), low self-esteem, (4), social-emotional delay (4), family guardians (3), adverse childhood experiences (3), divorce (3), being bullied (2), poor relationship with caregiver (2), medical problems (2), feelings of guilt or sadness (2), financial problems (1), limited social network child (1), cognitive functioning (1)
Family therapists	Conflicts/hardships in the household (8), mental health problems child (8), family members with mental health problems (8), conflicts with family (outside household), friends, or neighbourhood (7), limited strength capacity within the family (7), difficult cooperation with healthcare (6), divorce (4), parental guilt (3)
Group home workers	Behavior (8), problems and concerns of parents and siblings (8), mother (7), personality traits (5), adverse childhood experiences (4), relationship parents (4), father (4), out of home placement (4), cognitive and adaptive functioning (4), feeling unsafe (3), social emotional development (3), parent-child relationship (3), (former/future) healthcare (3), school (2), coping (2), grandparents (2), limited social network (2), physical health (1), transgender process (1)

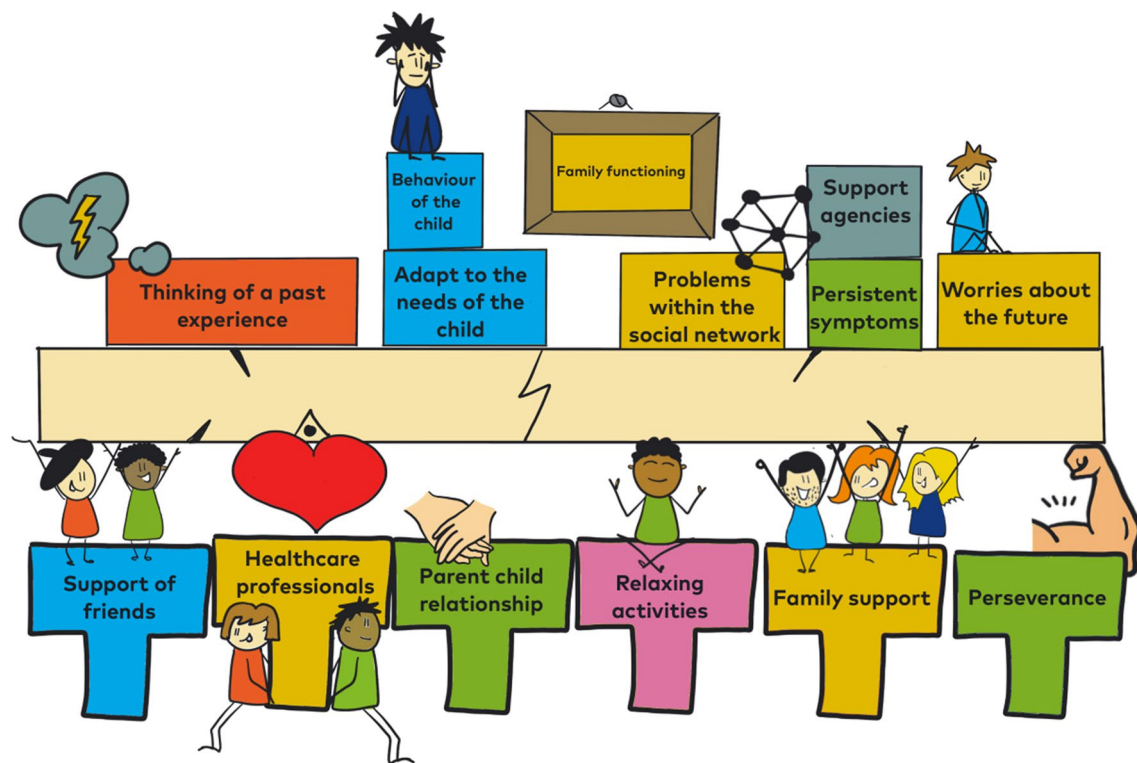


Fig. 4 Visualization of the most reported strengths and burdens of parents

groups were found. Burden dimensions related to mental health problems of the child and to (mental health) problems in the household were found among all informants. Although mental healthcare was reported as a strength by all informants, both children and parents reported mental healthcare as a burden as well (children: “former healthcare provider,” “current healthcare professionals”; parents: “healthcare organizations”). Likewise, family therapists and group home workers reported, respectively, “difficult cooperation with healthcare provider” and “former/future healthcare” as burdens. Dimensions regarding the residential care placement were reported as a burden by children (“being at the residential care center”), parents (“residential care placement”), and group home workers (“out of home placement”). Burdens in family functioning were mentioned by parents (“family functioning”), behavioral scientists (“conflicts in the family”), family therapists (“conflicts/hardships in the household”), and group home workers (“relationship parents”). Also burdens regarding the social network were found: parents reported “burdens in social network” and “limited (support) social network”, family therapists reported “conflicts in the family outside household” and “friends and neighbors,” and two group home workers reported “limited social network.” In addition to these common themes reported by multiple informants, other dimensions were reported by only one group of informants. Parents in particular reported a

wide range of burdens with a relatively high frequency that were not mentioned by the other informants, for example, “traits parents,” “worrying about the future,” “adjusting to the child,” “the past and thinking about it,” “parent-child interaction,” “emotions,” “aggression and threats to feelings of safety,” “family structure,” “limited relaxation or leisure time,” and “work.” See Fig. 4 for a visualization of the most reported strengths and burdens of parents.

Desires

In Table 4 the dimensions of desires are shown as reported by the different informants (in brackets the number of cases). Overall, all informant groups reported the desire that the lives of the children and their families changed in a positive way, mostly by mentioning that the problems that were placed as burden blocks in the Yucel constellation of the current situation would become smaller or disappear. In addition to this common desire, the informant groups emphasized different themes. For example, “living at home” was a desire reported by almost all children. Parents reported the greatest variety in desires and most of these desires were uniquely reported by only one of the nine parents. Desires of the behavioral scientist were mostly that family, school, and healthcare would become a source of strength (again). Group home workers mentioned desires regarding the improvement

Table 4 Dimensions regarding desires as generated by the different sources and their frequencies

Desires	
Children	Living at home (8), absence of burden blocks in the Yucel constellation (4), decline in behavioral and mood problems (3), healthcare (3), getting better at something (2), a new sister (1), transgender process (1), friends (1), not having to miss a specific person (1)
Parents	Smaller burden blocks in the Yucel constellation (7), treatment child (6), adequate support/care (5), school (4), finding balance (4), child can participate in society (4), finding peace (4), happiness and wellbeing (3), child living at home (3), expanding social network (3), employment prospects (2), positive future (2), child experiencing less burdens from parent (2), progression (2), assisted living for child (1), energy balance (1), staying in control (1), emotion regulation (1), no help needed (1), no burdens from the environment (1), no insecurities (1), no suicide (1), being heard (1), making good choices (1), putting what is learned into practice (1), grandparents staying alive (1), clarity in parent's own future (1), support for parents (1), less intensive support needed (1), self-reliance child (1), children coming over (1), no need to struggle (1), stability caregivers (1), breaking patterns (1), living together with partner (1), learning certain skills (1), trust in healthcare setting (1), knowing how to cope with child (1)
Behavioral scientists	Smaller or no burden blocks in the Yucel constellation (8), parents or family members becoming a strength (6), new strengths for family (3), more family stability (by changing the bar in the Yucel constellation) (3), school becoming a strength (3), healthcare or treatment becoming a strength (2), living at home (2), more leisure activities (2)
Family therapists	Living at home (8), no burden blocks in the Yucel constellation (4), no behavioral or mood problems (3), healthcare (3), learning certain skills (2)
Group home workers	Parent-child relationship (8), behavior (6), healthcare now and in future (6), acceptance of some burdens that might stay (6), personality traits child (5), brothers and sisters (2), support figures remain strengths (2), social contacts (2), school (1)

of the parent-child relationship, healthcare, and behavior of the child. Also they reported that some burdens might stay present, but that acceptance of it might ease the hardships.

Comparing the Strengths, Burdens, and Desires Identified with the Yucel Method to the Information Found in the Multidisciplinary Reports

To explore if by applying the Yucel method additional information is provided to that gathered in the standard diagnostic process, the information of the Yucel method was compared to the information found in the multidisciplinary reports of the children. In Table 5 strengths, burdens, and desires that were found in at least five out of nine multidisciplinary reports are presented. Overall, in the multidisciplinary reports, most emphasis was on child factors. Family factors were present, but to a lesser extent and contextual factors, were the least present. In the Yucel data, the ratio child, family, and contextual factors was more equal. In line with the Yucel data, the strength-based themes regarding activities, traits of the child, family characteristics, and mental healthcare were found in the multidisciplinary reports as well. Moreover, in the multidisciplinary reports, more burdens than strengths were found. Most burdens were related to child characteristics, especially mental health problems. Burdens in the family and burdens regarding healthcare were reported as well, but to a lesser extent than were found in the Yucel data.

Discussion

In the current study, the perspectives of neurodivergent children, their parents, and the involved behavioral scientist, family therapist, and group home worker on child and family strengths, burdens, and desires were investigated by using the Yucel method. Additionally, it was explored if the information gathered by using the Yucel method added extra information as found in the multidisciplinary reports regarding child and family strengths, burdens, and desires. In this paragraph the following main findings are discussed: 1. Commonalities in perspectives regarding strengths and burdens; 2. dimensions can be both a strength and a burden and are not mutually exclusive; 3. differences in perspectives on strengths and burdens; 4. unique desires; and 5. the additional information found by applying the Yucel method compared to traditional diagnostic information written in the multidisciplinary reports.

A great variety of strengths, burdens, and desires was identified by using the Yucel method. Both differences and similarities were found in the informants' perspectives. With respect to commonalities, strength themes that were often mentioned were mother, siblings, sports, and activities and mental healthcare. These strengths correspond to the Protective and Compensatory Experiences (PACEs) framework by Hays-Grudo and Morris (2020). PACEs are associated with positive development and promote resilience. They emerge from relationships (e.g., unconditional love from

Table 5 Dimensions of strengths, burdens, and desires in the multidisciplinary reports

Multidisciplinary reports	
Strengths	Sport and exercise (9), executive functions (8), impression of the child (8), cooperative attitude (8), social cognition, communication and interaction (8), language skills (8), motor skills (7), outdoor activities (7), interaction with peers (7), benefiting from structure provided (7), family in general (7), grandparents (7), support mental health services/agencies (7), mother (7), attention and concentration (6), activities on screen (6), health (6), adult interactions (6), social-cognitive skills (6), play development (6), visual and auditory development (6), self-reliance (6), friends child (6), connection with sisters and/or brothers (5), family activities (5), parents / caregivers (5), parents / partners working together (5), structure at home (5), trust in mental health organization (5), emotion regulation (5), dealing with authority and rules (5), sexual development (5), sleep (5), self-image (5), self-regulation (5), positive change since admission at the residential care center (5), school (5), support from care providers at institution (5)
Burdens	Emotion regulation (9), health (9), intelligence (9), peers (9), anxiety and tension (9), social communication and interaction (9), self-reliance (9), burden of parents (8), diagnosis (8), anger and aggression (8), social-emotional development (8), personal problems parents (7), attention and concentration (7), parent child relationship problems (7), ego-development (7), executive functioning (7), motor development (7), adverse childhood experiences (7), self-reflection (7), healthcare history (6), mental health parents (6), anxiousness (6), obstructive behavior (6), externalizing behavior (6), attachment problems (6), insecure and fearful of failure (6), self-regulation (6), school (5), mother child interaction (5), need for confirmation (5), alertness (5), demanding behavior (5) internalizing behavior (5), challenging behavior (5), dominant behavior (5), negative self-image (5), specific tics and habits (5), play development (5), out of home placement (5), friends (5), over-stimulation from environment (5), problems other family members (5), social network (5)
Desires	Child wants to live at home (5)

a parent or caregiver, having a best friend, support from someone outside the family) and resources (e.g., participating in sports or other physical activities, having an engaging hobby, attending school; Morris et al., 2021). Previous research has shown, for example, that youth benefit from participating in activities because it contributes to the feeling

of “belonging somewhere,” achievement and it focuses on someone’s abilities rather than problems (Darcy & Dowse, 2013; Duijvestijn, 2014). Moreover, formal and informal social support are associated with increased levels of resilience in parents of neurodivergent children, which in turn can contribute to the quality of life of children (Flores-Buils & Andrés-Roqueta, 2022; Widyawati et al., 2022). These strengths are important during times of adversity and stress, which neurodivergent children and their parents often face (Garner et al., 2013; Masefield et al., 2020). When providing these families care and support, strengths should be considered as they can provide an important foundation for recovery (Ryan & Deci, 2020).

Common burden themes identified with the Yucel method in all informants were primarily related to behavioral and mental health problems, mental healthcare, interactions with family or peers, and problems at home and in the family. These are challenges that neurodivergent children and their families often experience and for which they receive care (American Psychiatric Association, 2013; Masefield et al., 2020). The presence of both child and family burdens can be explained from the perspective that the health of the child and the health of parents are interconnected (Purpura et al., 2021). Understanding burdens of both parents and neurodivergent children is crucial during healthcare trajectories for improvement of their psychological wellbeing (Purpura et al., 2021). The commonly identified burdens by the different informants at child and family level illustrate that it is essential for healthcare professionals working with neurodivergent children and their families to offer services in a family-centered way.

Another result was that strengths and burdens are not always distinct categories. The dimensions mental healthcare and a variety of family factors were identified as both strengths and burdens by the informants. This is in line with literature as burdens and strengths are always personally and situationally related: the same factor can be a burden for someone’s development in one situation and buffering in another (Barnová & Tamášová, 2018).

In addition to the common themes found among the informants, also strength, burden, and desire dimensions were identified that were only reported by one or two informant groups. This shows that there were some differences in perspectives on child and family strengths, burdens, and desires between informants. For example, being and living at home was a central strength and desire theme from the perspective of children. This can be explained by literature which shows that residential care can create experiences of missing family life and poorer psychological wellbeing in youth (Cameron-Mathiassen et al., 2022). In the current study, the unique perspectives of parents were particularly evident. Parents mentioned the most strength and burden dimensions that were not addressed in the interviews with

the other informants. They reported extensively on family dynamics and their own challenges in the past and present (e.g., parent-child interactions, adjustments to their child and their own emotions, worries, traits, and past), which provided other and more detailed information than the family functioning themes that professionals mentioned. Another notable result was that there was a great diversity of parents' reported desires, illustrating a great diversity in needs. This underlines that healthcare trajectories must be adapted to the unique needs of the child and its family, as personal values and perspectives are central to recovery (Van der Stel, 2020). These examples of the differences in perspectives of children, parents, and the involved professionals reflect that care takes place in dynamic interpersonal contexts. Knowing the narratives of all those involved around the child matters as it contributed to a fuller understanding of child and family strengths, burdens, and desires. Therefore, assessment requires a multidisciplinary, multidimensional, and personal approach (Lehman et al., 2017; Lerner, 2006; Van Os, 2018). The results showed that the Yucel method is one way of gathering information from such an approach.

Finally, the comparison of the results on strengths, burdens, and desires from the Yucel interview with the information in the multidisciplinary report showed that the Yucel method provided additional information compared to the information drawn from the regular diagnostic assessment process at the residential care center. The multidisciplinary report contained by far the most strengths and burdens. As this report is a standardized format containing all reports by the multidisciplinary team, these numbers can be expected. However by looking into the nature of the strengths and burdens, it was found that the information in the multidisciplinary report contained dimensions that were mainly focusing on the child. Also, more burdens than strengths were reported in the multidisciplinary report. Using the Yucel method, the professionals (behavioral scientists, family therapists, and group workers) generated additional information, especially with regard to strengths and family and contextual dimensions. Also the interviews with the Yucel method with children and their parents provided information on family strengths, burdens, and desires, which was not found in the multidisciplinary report. These differences could be explained by the fact that current diagnostic systems for mental disorders mostly rely upon presenting signs and symptoms and less on underlying biopsychological mechanisms (Van Os, 2018). In contrast, the Yucel method is primarily a strength and recovery-oriented method with a systemic focus (Yucel, 2022). It is plausible that these different ways of obtaining information therefore also result in differences in the nature of the gathered information. The Yucel method is in line with a more transdiagnostic approach, in which the patient actively participates. Such a transdiagnostic approach may better serve our understanding

of underlying biopsychological mechanisms in neurodivergent children (Astle et al., 2021). Another explanation is that the Yucel method directly prompts informants to reflect about current experienced child, family, and contextual strengths, burdens, and desires. This can provide concrete and detailed information, whereas multidisciplinary reports are summaries with an overarching focus, often over a longer time period. Therefore, the comparison between information gathered by applying the Yucel method and the regular diagnostic assessment procedure requires caution. The comparison does indicate that the Yucel method may be a supportive method to integrate in the regular diagnostic assessment in mental healthcare to identify concrete child and family strengths, burdens, and desires of neurodivergent children and their families. Using such information for the purpose of strength and family-centered care trajectories could ultimately contribute to motivation, need satisfaction, psychological wellbeing, and recovery (Frielink et al., 2018; Ryan & Deci, 2020; Twomey & Carroll, 2018; Wehmeyer, 2020).

Strengths and Limitations

Our study has several strengths. It is the first scientific study on the Yucel method, aiming to contribute to the international knowledge base on child and family strengths, burdens, and desires from multiple perspectives. It makes a unique contribution to the knowledge regarding more strength-based and family-oriented ways of diagnostics in mental healthcare for neurodivergent children and their families. The data collection and analyses were coordinated in a structured and transparent way. This is illustrated by the moderate to almost perfect inter-rater reliability. Also, the researchers cooperated with an advisory board of professionals in practice to ensure clinical relevance. As in the analyses we stayed as close as possible to the language and experiences of the participants, which made it possible to gain more insight into the unique perspectives of all people involved in the care and support of these children.

This study is not without limitations. First, only one Yucel interview and two constellations were used, while the Yucel method is originally developed for use in a multiple session format in a mental healthcare trajectory. What we found is that the Yucel method as used in this way is supportive in gaining insight into child and family strengths, burdens, and desires from different perspectives. Also we found that all neurodivergent children and their parents were able to work with the Yucel method and were able to generate strengths, burdens, and desires. In future research, it should be investigated if the method actually leads to better health (care) outcomes in practice for children and families.

Second, the emerged strength, burden, and desire themes require a cautious comparison and interpretation. All

informant groups were asked about child, family, and contextual strengths, burdens, and desires, but the nature of the semi-structured interviews and heterogeneity in and between the informant groups prevent us to make definitive statements on the meaning of these themes for neurodivergent children and their families in general. Moreover, the accumulated strength, burden, and desire dimensions between informant groups were analyzed instead of looking at these dimensions at a case level. A large amount of dimensions was only reported in 1 of 9 cases. This does not mean that the lesser cited strength and burden dimensions were less important on an individual level. What we did learn from this accumulation and comparison was to what extent the perspectives of the different informant groups complemented or confirmed each other. It showed the importance of considering strengths, burdens, and desires from the perspective of all involved in mental healthcare trajectories of a child and its family.

Third, as noted earlier the comparison between the results found by applying the Yucel method and those found in the multidisciplinary reports should be taken with caution, given the differences in how this information is gathered and how strengths, burdens, and desires are identified.

Finally, only nine children, their parents, and the involved professionals were included. Thereby a weakness of the study is that the sample size is relatively small. Also the study population is specific (neurodivergent children in residential care), which may limit the generalizability of the results. Future research on the Yucel method should expand the participant base and should include a wider demographic range. Also future studies could benefit from quantitative data to complement and validate current qualitative findings. This could contribute to a more comprehensive understanding of the use and possible effectiveness of the Yucel method in neurodivergent children and their families.

Clinical Implications

The results of this study show that gaining insight into strengths, burdens, and desires from different perspectives using the Yucel method can address current goals in healthcare to shift from traditional disease-focused care to more strength-based patient- and family-centered care for a variety of reasons. First, by not solely looking at neurodivergent children through the lenses of limitations, pathologies, and risks but from the perspective of human diversity and therefore also focus on their experienced strengths and desires. This provides an important foundation for strength- and resilience-based care and support. Second, by contributing to a joint insight into the experienced strengths, burdens, and desires of the person(s) seeking help. The results emphasize the importance of professional awareness of the different unique perspectives of all those

involved. The multidimensional Yucel method bears the possibility to include perspectives of all involved around the child. Thereby, the method can provide more (visual) insights into the dynamics and complex interactions between the child and family but also the professional and organizational context compared to information gained in regular diagnostic processes. When problems are complex and dynamic, which is often the case in neurodivergent children in residential care and in their parents, choosing the most appropriate intervention is not easy. It is important that families are able to understand their problems from an integrative and systemic approach, to jointly come to the appropriate choices in interventions (Tempel et al., 2022). Third, the results underline that insights of the parents contain unique information and is crucial when considering appropriate interventions. Asking parents about concrete experienced strengths and burdens and about the meaning for them promotes shared decision-making, can enhance appropriate help, and contributes to the inclusion of parental perspectives in clinical practice (Nooteboom et al., 2020). Finally, professionals may benefit from the information generated by using the Yucel method in addition to more traditional forms of diagnostic assessment providing deeper insights into the unique life stories of mental healthcare users.

Conclusion

This study made an important contribution to the international knowledge regarding more strength-based and person- and family-centered ways of diagnostics in mental healthcare for neurodivergent children and their families. The results showed that using the Yucel method is a way to gather information from a multidisciplinary and multidimensional approach. The different perspectives on strengths, burdens, and desires reflected that care takes place in dynamic interpersonal contexts. Therefore, knowing the narratives of all involved is required for an adequate understanding of child and family strengths, burdens, and desires. Such an understanding can contribute to personalized care that meets the unique needs of neurodivergent children and their families. Using the visual and tactile Yucel method led to a better picture of strengths and different perspectives than diagnostic assessments as usual in the first phase of residential care. Future research should investigate if the method actually leads to better health (care) outcomes in practice for neurodivergent children and their families.

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Data Availability The data of this study are not publicly available due to confidentiality agreements between the researchers and participants and cannot be shared.

Declarations

Conflict of Interest The authors declare no competing interests.

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