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A Taxonomy of Care for Youth: Results of an Empirical Development Procedure

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Abstract

Purpose: Statements about potentially effective components of interventions in child and youth care are hard to make because of a lack of a standardized instruments for classifying the most salient care characteristics. The aim of this study is to present an empirically developed taxonomy of care for youth (TOCFY) which is feasible for use in daily practice, including an explanation of the developmental process itself. Methods: The development procedure, comprising of different stages, contributed significantly to the foundation of the taxonomy. Results: The operational version consists of six domains: (1) contents of the intervention; (2) judicial context; (3) duration of the intervention; (4) intensity of the intervention; (5) intervention recipients; and (6) expertise of professionals. The terminologies used to describe treatment programs and the levels of classification were standardized for each organization participating in our study. By doing so, the feasibility and manageability of the taxonomic system in daily practice increased. Discussion: Using TOCFY in daily practice provides the opportunity to gather information on care and treatment characteristics within care organizations. The strength of TOCFY is that its framework can be extended to other care organizations within child and youth care. Replication of the findings of our study in other child and youth care settings is needed, because this study only covered one province in the Netherlands.

Keywords

taxonomy, child and youth care, instrument development, feasibility

In research, daily practice, and policy, interest is increasing in information about the characteristics of care and treatment for children and youth with behavioral and emotional problems (Ballinger, Asburn, Low, & Roderick, 1999; Chorpita & Daleiden, 2009; Cjaza, Schulz, Lee, & Belle, 2003; Ezell et al., 2011; Harden & Klein, 2011; Lee & Barth, 2011; Lee, Bright, Svoboda, Fakunmoju, & Barth, 2010; Ryan & Schuerman, 2004; Zeira & Rosen, 2000). Because of a lack of standardized instruments for recording and classifying the contents of the care that is offered, statements about potentially effective components of care and treatment are hard to formulate (DeJong, Horn, Gassaway, Slavin, & Dijkers, 2004; Ezell et al., 2011; Schulz, Czaja, McKay, Ory, & Belle, 2010; Weersing, Weisz, & Donenberg, 2002). A taxonomy that is capable of classifying the most salient aspects of the care process would help to connect outcomes and treatment characteristics empirically (Lee & Barth, 2011).

A recent review (Evenboer, Huyghen, Tuinstra, Reijneveld, & Knorth, 2012) revealed that several taxonomies in the field of health care, family care, and child and youth care have been developed in the past 10 years. These taxonomies include domains such as the intervention content, the environment in which the intervention took place, the recipients of care and treatment, and the intensity and complexity of the intervention. Information about the use in daily practice of these taxonomic systems is scarce. However, if the system is to be used to systematically record information on care and treatment, the feasibility of use of the instrument in daily practice is of major concern.

All of these taxonomic systems use domains, categories, and subcategories in order to categorize the contents and characteristics of the care that is being offered. The level of categorization varies from the level of detailed intervention techniques, that is the micro level, to that of aggregated care systems, that is the macro level (De Jong, 1995). Micro-level classifications refer to techniques and activities that were used during the treatment. Meso-level classifications refer to individual interventions and treatment modules. Macro-level classifications refer to treatment programs or provisions on a more abstract

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level, which is the one generally used by policy makers, for instance.

The taxonomy that we will present in this article was developed in order to make classifications at a *meso* level. After all, this is the most "feasible" level when it comes to developing a taxonomy of care which can be used in daily practice. Gathering information at a micro level requires too much time of a professional during his or her daily tasks, making it unfeasible (Van Yperen, Konijn, & Ten Berge, 1999). Collecting information at a macro level would not meet our goals because then we would not have information about the individual components of an intervention or treatment program. The meso level lies in between these two levels of classification and is intermediate between information that is too specific and information that is too general.

Although the taxonomies contain a variety of domains useful for classifying care and treatment, none of them fully suffice in daily practice. Moreover, there is scarcely any information on the psychometric qualities of the taxonomic systems available. The conclusion of this review is that (a) there are seven domains that are relevant as part of a care taxonomy for youth, namely, "intervention contents," "recipients of intervention," "expertise of professionals," "duration of intervention," "intensity of intervention," "judicial context of intervention," and "environment in which the intervention takes place," and (b) the applicability of any taxonomy to daily practice should be given high priority.

The aim of this study is to present an empirically developed taxonomy of care which is feasible for use in daily practice, including an explanation of the developmental process itself. Consecutively, we will present (1) the steps undertaken during the development procedure, (2) the results regarding the conceptually relevant domains, and the standardization of levels of classification and terminologies used, and (3) a final classification system at the meso level called taxonomy of care for youth (TOCFY).

Method

The taxonomy was developed within the context of C4Youth. C4Youth, the Collaborative Centre on Care for Children and Youth with behavioral and emotional problems, is a partnership set up in early 2010 that includes university research departments, care organizations, and local authorities in the northern part of the Netherlands. One of the aims of the C4Youth study is to explore the association of client needs, the care offered, and the outcomes for a large number of children and adolescents with behavioral and emotional problems (Knorth, Reijneveld, Van Eijk, Noordik, & Tuinstra, 2011). The use of a taxonomy in daily practice can yield more insight into "what works"; in other words, the "black box" of the care and treatment process may be—at least partially—opened by recording what is happening during the treatment (Sinclair, 2010).

Care organizations participating in this study are operating in the fields of primary health care (GGD Groningen); child, youth, and family social care (Elker); and mental health care for children and adolescents (Accare; Jonx | Lentis).

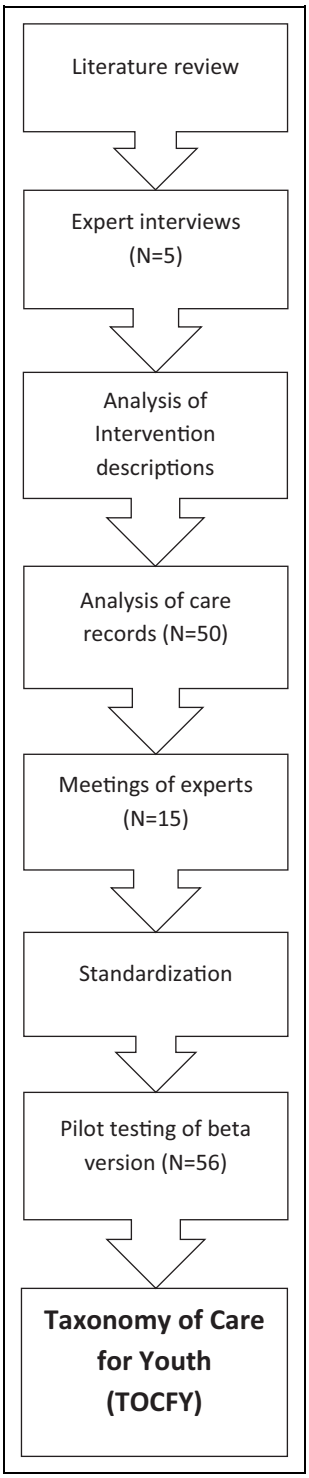

Figure 1. Development procedure for the Taxonomy of Care for Youth (TOCFY).

Stages of Development

The empirical development procedure of the taxonomy of care consists of several stages as presented in Figure 1. This developmental procedure was a process, in which first we developed a framework, and then we gathered information using this

framework. We then analyzed the information, and the outcomes of the previous stage determined the next stage. Each of these stages contributes significantly and will—with the exception of the literature review—be discussed briefly in what follows.

Expert interviews. The first phase after the literature review consisted of interviews with five experts (2 males and 3 females) who worked in child care and welfare organizations, knowledge centers, and universities in the Netherlands. The aim of this stage was to interview experts about their expertise concerning the development of a care taxonomy. The contents of this semistructured individual interview, carried out by the first author and two coauthors (A.M.N.H./E.J.K.), were based on the findings from the review (Evenboer et al., 2012). Questions were asked about the requirements concerning domains, and categories and subcategories (uniaxial or multiaxial design), about the use of overlapping and residual categories, about the level of classification that should be used (micro/meso/macro), and about the application of a hierarchical structure. Furthermore, the experts were asked about the domains that should, according to them, be included in the taxonomy, and about how to structure a care taxonomy. The next phase was to find a way to categorize the interventions that were offered by the care organizations.

Analysis of intervention descriptions. In the second stage, we gathered information about the interventions offered by the partnership organizations Accare, Elker, GGD Groningen, and Jonx | Lentis. The aim of this stage was to get an overview of the care being offered, which then could be categorized and classified. From each care organization participating in the C4Youth study, we obtained protocol descriptions of the interventions that they offered. These protocols described which activities the intervention contained. In this way, we were able to classify the care that was offered by each care organization, thus providing a structured overview of the intervention components which, it should be noted, varied in detail per organization. The data were collected and analyzed by the first author and discussed with all the coauthors. The next phase was to assess whether information about care and treatment could in fact be derived from the care records of children in youth care.

Analysis of care records. In this stage, we analyzed the care records of children in child and youth care who were participating in the C4Youth study in order to obtain information about which characteristics of the care process were recorded in these files ($N = 50$). The aim of this stage was to obtain information about the contents of the care records of children and youths and about whether a taxonomy of care could be used to classify the most important aspects of the care that was offered. Two of the four participating organizations allowed us to study the records of children and families who were receiving care and treatment. We were interested in information about which intervention was offered, the judicial context in which that intervention took place, the intensity and duration of the intervention, the intervention recipients, and the expertise of the professional/professionals involved. The analysis was conducted by the first author and a research assistant. We systematically recorded information about the above-mentioned components, specifically in order to note whether it was available in the care record of a child. These analyses were also used for building a conceptual framework to decide which domains should be included in a taxonomy of care. The literature study, expert interviews, intervention descriptions, and care records provided the input for creating the first version of the TOCFY. Because the feasibility of the instrument is a crucial aspect, in the next phase we asked experts to rate the usability of the system.

Meeting of experts. In this fourth stage, the first version of the taxonomy was discussed in a meeting of experts. The aim of this stage was to involve experts and professionals in the fine-tuning of the taxonomy. We invited experts from each of the organizations that participated in C4Youth, and from all other relevant care and welfare organizations in the region concerned, which resulted in a group of 15 professionals (1 male and 14 females). Mainly care professionals were involved in this group, complemented with a few local/regional policy makers. We thus succeeded in forming a diverse group of experts that represented nearly the entire field of care for children and youth with behavioral and emotional problems. After an introduction and presentation of case vignettes, each participant was asked to apply the taxonomy to these cases and to give feedback, individually and within the group.

The feedback mainly concerned adjustments in the terminology that was used in the first version of the taxonomy. One of these modifications concerned the terminology that was used within TOCFY. Some care organizations, for instance, called the units within the care that was offered "interventions," while others used the term "treatment modules." We decided to use the organization-specific terminologies of the organizations participating in the C4Youth study. This mainly affected the first domain, the contents of the intervention. The result was the formulation of a number of categories within the first domain, each for a specific care organization. All the experts agreed with this modification, because it made it easier for professionals to recognize the care offered within their organization. The first author conducted the analyses, which produced a second version of TOCFY.

Subsequently, a second meeting of experts was organized, and at this meeting we presented the adjusted version of the care taxonomy. The same experts were invited again to participate and, if they were unable to attend, a colleague from the same organization was invited ($N = 15$; 1 male and 14 females). Using fresh case descriptions, the experts were asked to examine whether the taxonomy was manageable and understandable. The aim of the meeting was to guarantee the face validity of our system by making a point of involving experts in the development procedure. The first author analyzed the feedback of the professionals and once again this was used to adjust the taxonomy, resulting in a third version of TOCFY.

Standardization. The care organizations partly used their own, sometimes rather idiosyncratic terminologies to specify the contents of interventions or programs they applied. This is a well-known phenomenon in the field that obviously is not beneficial for transparent communication about care and treatment (Van Yperen, 2003). Classifications could have been made at different levels, that is, at the micro, meso, and macro levels (De Jong, 1995). The aim of this stage was to standardize the level of classification within TOCFY. The level of specification within organizations differed: labels could vary between designations such as, for instance, ''modeling'' or ''empathic listening''—terms that refer to the micro level of treatment techniques—and designations such as ''outpatient work,'' ''education at school,'' or ''family foster care,'' which are very rough or macro-level indicators of intervention. By far most of the labels, however, referred to a level in between, that is, the meso level of care or treatment modules. A ''care or treatment module'' is a delineated treatment program, which is applicable to multiple target groups (De Ruyter, 2000). During this stage, we did a final check on the list of taxonomic labels or categories. Indicators on the micro level were deleted and aggregated to a meso level; macro-level labels were broken down into various meso-level labels with the help of the care organizations. This resulted in a series of taxonomic categories solidly phrased in terms of a meso-level description.

Pilot testing the beta version. The aim of the last stage was to test the meso-level taxonomy on randomly chosen electronic or paper records ($N = 56$), of children in health care, and in child and youth care. The pilot test was conducted by two independent researchers (MSc students at the University of Groningen, who were supervised by the first author), in order to assess whether TOCFY could be used to systematically gather information about the care process of children and their families. During the pilot testing, the taxonomy was further fine-tuned for some minor points (i.e., so as to make it all the more manageable for the organizations) and then finalized. The results of the pilot test led to minor changes; changes were made, for example, in the names of the interventions, two fairly similar interventions were combined, and then included in the system under one name. An electronic version of this taxonomy is currently being prepared for future use.

Analysis and reporting. Regarding the results, the conceptual framework of the care taxonomy will be the first to be discussed. Here we will focus on (1) the domains which are found to be relevant by the experts and (2) the level of classification. Subsequently, the elaboration of the taxonomy into a prototype which could be used in daily practice will be discussed. Following this, we will present TOCFY.

Results

In the results section we will present (1) the steps that were undertaken during the development procedure, (2) the results concerning the relevant domains and level of classification, and (3) the final classification system, TOCFY. First, we will briefly explain the development procedure, the domains, and level of classification of the taxonomy.

Development Procedure

During the development of the TOCFY, we followed an empirical procedure which consisted of seven stages, including the literature review. The outcomes of each previous stage defined the next stage. As Figure 1 shows, a concatenation of different stages was the outcome. Each of these stages contributed significantly to the development of the taxonomy.

Domains

The various stages during the development procedure resulted in seven domains, six of them included in the electronic version of the care taxonomy (see hereafter). The experts emphasized that the domain *contents* of the interventions made up the most essential part of the information that needed to be gathered on the care that children and their parents had received. All the interventions offered by a care organization then needed to be included in order to make the taxonomy exhaustive, understandable, and manageable in practice for the professionals concerned. The interviews of experts and the meetings of experts showed that the *judicial context* in which the care was provided was yet another important characteristic which needed to be monitored. The literature review, meetings of experts, and file analyses resulted in the decision to add domains concerning the *duration* and *intensity* of the intervention (Krumholz et al., 2006; Schulz et al., 2010; Van Yperen et al., 1999). Besides to the child interventions can be directed at various persons found in the environment of the child. This is why not only the literature study but also the experts advocate that the *recipients* of the intervention should be included in the taxonomy (DeJong et al., 2004; Krumholz et al., 2006). In addition, the *setting* in which the care is provided is an important characteristic of the treatment process (Krumholz et al., 2006; Van Yperen et al., 1999). A final dimension concerned the *expertise* of the professionals who were engaged in the care or treatment offered (Schulz et al., 2010; Van Yperen et al., 1999).

Level of Classification

The experts in our panels stressed that it was almost impossible to gather information within care organizations at the most detailed level, the micro level. The daily routine of the professional is not geared to such a detailed way of gathering information about the care process, one which would be necessary for classifying at a micro level. The experts expected that, as a consequence, professionals would not be able to use the taxonomy because of its complexity. As a result the meso level was indicated as the optimal level of classification which could be used in the care taxonomy. At this level, information is gathered concerning treatment methods and modules, for example,

treatment methods such as ''parent training'' and ''psychoeducation.''

In the C4Youth study, the professionals will be the main source of information on the specific care that was received by children and their parents/caretakers. In communicating about this care, they will make use of the labels and terms that they are used to within their own organizations. During the *phase of collecting data*, these terminologies for describing the care and treatment of the participating organizations will be used, to increase the applicability of the system in routine care. The result is that for each organization—when it comes to terminologies—there is a differentiated taxonomy. This serves to enhance the reliability of how the information on care and treatment is being gathered.

When it is time for the *phase of reporting* on the research results, however, the terminologies will be standardized using the system of the Netherlands Youth Institute (De Ruyter, 2000). The differentiation between different care and treatment modules will be implemented by using descriptors such as the function of care and treatment (e.g., education, behavioral change), the goals and activities of the treatment, the duration and intensity of the treatment, the expertise of the professionals, and the setting in which the treatment is located. This way, we may generalize from the organization-specific terminologies to a wider range of organizations.

Taxonomy of Care for Youth: TOCFY

The conceptual framework, as described previously, was converted into a system which could be used by professionals in daily practice. The TOCFY consists of six domains. Since one domain, the *setting* in which the intervention takes place (at home, at the agency, etc.), can be derived from the information in the other six domains, it was not included as a separate domain. We will describe the actual measurement of all six domains further in the sections below.

Contents of the intervention. The first, most extensive domain describes the contents of care. In the TOCFY, this domain has been elaborated for the four care providers participating in the C4Youth study, each of them adjusted to their own specific situation. The upper part of Table 1 (Section A) gives an impression of this.

Table 1 shows just a small part of the specifications of the first domain with several categories and subcategories per organization (these categories have been labeled with an asterisk in Table 1). For example, the intervention ''Care program ADHD and behavioral disorders'' (A403) of the mental health care provider ''Accare'' consists of three categories: two diagnostic modules and one treatment module (A403.1–A403.3 in Table 1). The last category, ''Treatment module ADHD & ODD/CD'' (A403.3), is further divided into nine subcategories. One of these subcategories, ''parent training'' (A403.3c), has been further subdivided into ''individually'' (A403.3c1) and ''in-group'' (A403.3c2). In this way, a differentiated taxonomy was developed at the meso level. The whole range of care and treatment modules, available within these organizations, is covered by this pivotal part of our taxonomy.

Judicial context. This domain has six categories which were validated by the experts in the second meeting of experts. The categories indicate whether the care was offered voluntarily, within the context of a civil or penal placement, or of a coercive or compulsory placement.

Duration. The domain ''duration'' of the intervention (Table 2) has nine categories, varying from less than 4 weeks of care and treatment up to a stay of more than a year within care. The meeting of experts indicated that the way in which the duration of the treatment was categorized in the TOCFY was manageable within the care organizations.

Intensity. The domain of ''intensity'' of the intervention concerns the average number of contacts per day/week/month/year (they were only allowed to choose one of the options) and the average number of minutes for each contact (Table 2).

Recipients. This domain was measured in 13 categories covering the whole range of persons and the environment that might be involved during the treatment. The professionals were only allowed to choose one of the categories, one which would represent specific combinations of intervention recipients. The category ''Other'' was submitted in case the right combination was not provided by the TOCFY.

Expertise. In the taxonomy, the expertise of the caregiver was classified using 32 categories. This domain contains the whole range of professionals that could be involved during the treatment trajectory of the care. If a discipline or expertise still was not available in the TOCFY, it could be added under the category of ''other, namely.''

Discussion

The aim of this study was to describe and discuss the empirical development procedure of a TOCFY. Our findings show that such an empirical procedure is feasible and lead to the identification of and consensus on a number of characteristics that a taxonomy should have. Next, these conceptual characteristics were operationalized in a taxonomy that could be used in routine practice, labeled as the TOCFY. This taxonomy conceptually consists of seven domains: ''contents of the intervention,'' ''judicial setting,'' ''duration of the intervention,'' ''intensity of the intervention,'' ''intervention recipients,'' ''expertise of the professionals'', and ''setting in which the care is being provided.'' In the operational version of the taxonomy, the ''setting'' need not be included.

The empirical development procedure increased the feasibility of the taxonomy in daily practice. A main purpose of developing TOCFY was to ensure that the taxonomic system was manageable in daily practice for professionals. By using standardized terminologies, information about the care that is offered to children and their families can be gathered.

Table 1. Specification of one of the categories per care organization as an example

Categories	Subcategories
Primary health care (GGD)	
A104 Interventions aimed at families	A104.1 Multi-problem family
	A104.1a Meeting with professionals
	A104.1b Visits at home
	A104.1c Contact with the parents/caretakers by phone
	A104.1d Other, namely . . .
	A104.2 Psychiatric problems
	A104.3 Parents with intellectual restrictions
	A104.4 Family problems
	A104.5 Other, namely . . .
Child, youth, and family care (Elker)	
A201 Immediate care	A201.1 Families First
	A201.2 Ambulatory immediate care
	A201.3 Crisis shelter 24 hrs.
	A201.3a Observational diagnostics
	A201.3b Basic care
	A201.3c Counseling
	A201.3d Other, namely . . .
	A201.4 Crisis shelter foster care
	A201.4a Diagnostics
	A201.4b Basic care
	A201.4c Coaching conversations
	A201.4d Other, namely . . .
Child and youth psychiatric care (Jonx | Lentis)	
A301 Care program for behavioral disorders	A301.1 Diagnostic trajectory
	A301.2 Treatment/guidance
	A301.2a Individual treatment
	A301.2b Psycho education
	A301.2c Parent counseling/mediation training/parent coaching
	A301.2d System therapy
	A301.2e Social skills training
	A301.2f Video family treatment
	A301.2g Case management
	A301.2h Intensive Home-based treatment
	A301.2i Cognitive behavioral therapy
	A301.2j Medication
	A301.2k Other, namely . . .
Child and youth psychiatric care (Accare)	
A403 Care program for ADHD and behavioral disorders	A403.1 Diagnostic module ADHD & ODD/CD (standard)
	A403.2 Diagnostic module ADHD & ODD/CD (on indication)
	A403.3 Treatment module ADHD & ODD/CD
	A403.3a Psycho-education
	A403.3b Medication
	A403.3c Parent training
	A403.3c1 Individually
	A403.3c2 In group
	A403.3d Home-based treatment
	A403.3e Supporting contacts
	A403.3f Cognitive behavioral therapy
	A403.3g Parent Child Interaction Therapy (PCIT)
	A403.3h Family behavioral therapy
	A403.3i Other, namely. . .

Moreover, the level of classification was standardized within the taxonomy of care. Macro- and micro-level descriptions were converted into meso-level descriptions. Standardizing the terminologies used and the levels of classifications was an important step. Feasibility of the taxonomy will be able to be proven through performing data collection on over some 3,000 clients currently in care (Knorth et al., 2011). Future analyses should show whether this data collection indeed yields comparable data at the meso level for the various providers of care that were covered.

Table 2. Domains of the Taxonomy of Care for Youth

Taxonomy of care for youth (TOCFY)	
Domain	Categories
A) Contents of the intervention	***A100 Primary health care (GGD)*** A101 Interventions aimed at rearing problems A102 Interventions aimed at inadequate educational skills A103 Interventions aimed at adolescent problems A104 Interventions aimed at family problems* . . . . A113 Light family support A114 Other intervention, namely . . . ***A200 Child, youth and family care (Elker)*** A201 Immediate care* A202 Ambulatory family care A203 Ambulatory youth care A204 Trauma care . . . . A209 Mental health care A210 Other intervention, namely . . . ***A300 Child and youth psychiatric care (Jonx|Lentis)*** A301 Care program behavioral disorders* A302 Care program attention deficit disorders A303 Care program autism spectrum disorders A304 Care program anxiety disorders . . . . A308 Care program Fetal Alcohol Spectrum Disorder (FASD) A309 Care for other disturbances, namely . . . ***A400 Child andyouth psychiatric care (Accare)*** A401 Care program anxiety, compulsive, and mood disorders A402 Care program autism spectrum disorders A403 Care program ADHD and behavioral disorders* A404 Care program tic disorders . . . . A411 Daycare/inpatient treatment adolescents 13-19 years A412 Other intervention, namely . . .
B) Judicial context of the intervention	B100 No coercive or compulsory placement B200 Care within the context of a civil placement B300 Care within the context of a penal placement B400 Coercive or compulsory placement B500 Unknown or not otherwise specified B600 Other . . .
C) Duration of the intervention	C100 < 4 weeks C200 4 to 7 weeks C300 7 to 9 weeks C400 9 to 12 weeks C500 3 to 7 months C600 7 to 9 months C700 9 to 12 months C800 12 months or more C900 Unknown or not otherwise specified
D) Intensity of the intervention	D100 Average number of contacts per day/week/month/year D200 Average number of minutes per contact D300 24-hour help D400 Average number of contacts not known or not otherwise specified D500 Average number of minutes per contact not known or not otherwise specified

(continued)

Table 2. (continued)
Taxonomy of care for youth (TOCFY)

Domain	Categories
E) Recipients of the intervention	E100 Child E200 Parent/Caretaker E300 Parent & Child/Brothers/Sisters E400 Child & Parent/Caretaker E500 Neighborhood (neighbors/family/friends) E600 Child & Neighborhood E700 Child & Parent/Caretaker & Neighborhood E800 School & Child E900 School E1000 Foster family/Foster parents E1100 Foster family/Foster parents & Child E1200 Other . . . E1300 Unknown or not otherwise specified
F) Professional expertise	F100 Child and adolescent psychiatrist F200 Psychologist F300 Clinical psychologist F400 Pedagogue F500 Psychoanalyst F600 Family adviser F700 Social worker F800 School social worker F900 Case manager F1000 Visiting nurse F1100 Care controller F1200 Socio-psychiatric nurse F1300 Psychiatric nurse F1400 Socio-pedagogical care worker F1500 Magistrate of a juvenile court F1600 Pediatrician F1700 Neuropsychologist F1800 Educational therapist F1900 Remedial teacher (school) F2000 Creative therapist F2100 Physiotherapist F2200 Socio-pedagogical care worker F2300 Speech therapist F2400 Occupational therapist F2500 School doctor F2600 Child nurse F2700 Nurse practitioner F2800 (General) practitioner F2900 Behavioral scientist F3000 Nurse F3100 Other, namely . . . F3200 Not known or otherwise specified

Compared with the taxonomies that are currently available in the field of health and child and youth care (Krumholz et al., 2006; Thoroddsen, 2005, Van Yperen et al., 1999), our taxonomy of care is the first taxonomic system which is capable of gathering information on the most salient aspects of the care and treatment process within *child and youth care* at the meso level. This provides opportunities to investigate the relationship between the problems that children have and the care that was offered to them. This information will also offer opportunities to assess whether certain combinations of problems and care lead to more favorable outcomes (cf. De Jong, 1995; Sinclair, 2010). Moreover, the use of a taxonomy of care may lead to standardization of the terminologies that are used within care organizations, enabling easier communication.

Strengths and Limitations

A major strength of this study is the use of an empirical and reproducible development procedure. This has led to a

taxonomy of care which seems to be manageable for professionals in daily practice and has a high face validity. Another strength of the study is that the framework of the TOCFY enables the care that is offered by other care organizations to be accommodated. A limitation of the study may be that we included professionals from only one region, which leaves the question of whether our findings can be generalized to other regions or settings. An additional study would be required to ascertain this. Moreover, in the first domain of TOCFY we used the terminologies of the care organizations participating in the C4Youth study, representing primary care, youth and social care, and mental health care. When using the taxonomy in a care organization in another region, the categories and subcategories would need to be adapted to the terminologies used in that specific care organization.

The taxonomy of care is being proposed for research purposes, not for immediate clinical or administrative use. The reliability of the instrument is in the process of being measured at the moment. Results concerning the interrater reliability are not yet available but are currently being studied.

Implications

This study has several implications for research into care for children and adolescents with behavioral and emotional problems. First, our procedure may be of use for developing other taxonomies of care in the future. Replication of the findings of our study in other settings in child and youth care is needed.

Our findings also have implications for daily practice. Using TOCFY in daily practice provides the opportunity to gather information on care and treatment characteristics. When this kind of information is gathered in a structured way, more insight into the care offered to children and their families results. This may enable future research on effective components. Using a taxonomy of care can be a step toward opening the black box of care and treatment (Sinclair, 2010). This may also reveal what is behind the labels, given those interventions for youth with behavioral and emotional problems which are offered by the various care organizations. And this in turn might make a considerable contribution to better care for vulnerable youth and their families.

At the present time, professionals participating in the C4Youth study fill in questionnaires about the care that is offered to children and their parents. The items in this questionnaire are linked to the six domains of TOCFY. The answer categories in the questionnaire are the categories and subcategories as classified in TOCFY. The completion of these ''multiple-choice'' questions allows us to gather information in a structured way about the care that was offered. In a subsequent step of our research this information will be used to explore the association between the needs of children and parents, on one hand, and the care services which have been applied, on the other hand. Empirical data on this issue are important as input in the ongoing debate about the quality of social care in provisions for children with emotional and behavioral problems (Courtney & Thoburn, 2009; Little & Maughan, 2010).

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