Psychosocial Interventions: a Cognitive Behavioral Approach

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Introduction

Childhood cancer in the family is an obviously stressful situation. A great deal of research has been conducted to investigate the emotional reactions and coping strategies of children with cancer and their parents. Different findings are reported for both children with cancer and their parents. Several studies that investigated the psychological and social adaptation of children with cancer found that they did not differ significantly from healthy controls, but subsets of more vulnerable children have been identified [1]. In a review on young childhood cancer survivors it is also shown that overall emotional adjustment of the survivors as a group was within normal limits [2]. However, one-third of the adolescent survivors met the criteria for lifetime posttraumatic stress disorder (PTSD), which is a higher percentage than in the general population [3, 4]. Moreover, research on specific areas of psychosocial adjustment has found that about one-third of survivors and their family members have experienced personal, family or social difficulties that have affected their academic achievement, employment, interpersonal relationships or self-esteem [5]. Many studies have been conducted among parents of children with cancer and different reactions have been reported for different periods of treatment [6]. Researchers who focused on parents of newly diagnosed children with cancer, or children who are in treatment, report increased emotional distress such as anxiety or depression, when compared to parents of healthy children. Some studies have found that parents continue to experience psychological distress over time [7], while others have found that the elevated levels of distress decline, within a few years to comparable levels in the general population [8, 9].

Contradictory findings among children and parents can partly be attributed to the inappropriateness of instruments to measure the impact of childhood cancer. Studies focusing on illness-related psychosocial consequences instead of depression and anxiety, found that problems for parents concerned uncertainty and loneliness [10, 11], or anxiety about the child’s future, health and relapse [12]. Other explanations for the scarcity of serious adjustment problems are children’s and parents’ capacities to develop strengths and abilities to “bounce back” [13]. Another possible explanation could be “response shift,” which means that the experience with cancer has changed the children’s conceptualization of problems. As a result of this response shift, problems are being underreported. Response shift has also been described in adults with cancer [14]. In other words, the reliance on different coping strategies such as avoidance, social support, and open communication play an important role in the emotional adjustment of children with cancer and their parents.

Several intervention studies showed the possibilities of improving coping strategies and reducing feelings of distress in children with cancer [15]. Empirical evaluations of intervention programs for parents are, however, rare and report limited significant effects on adjustment [16]. The aim of this chapter is to provide an understanding of the emotions and coping strategies, and behavioral reactions of children with cancer and their parents. First, the cognitive approach will be outlined, with the theoretical background of cognitions and emotions. This will include a description of emotions in the light of different situational meaning structures which determine the appraisal of the situation for children with cancer and their parents. Situational
meaning structures which are important for children and parents are, for example, uncertainty about the outcome of the disease, responsibility for the cause and the course of the illness, and the uncontrollability of the situation. Thereafter, the process of coping is discussed and a conceptual framework is presented as a tool to comprehend children’s and parental reactions to childhood cancer. Because the coping process of children with cancer and their parents is greatly influenced by the uncontrollability of the situation, we chose the model developed by Rothbaum, Weisz and Snyder [17] in addition to the traditional approach. Their model describes control strategies which can be used to understand the coping behaviors of children with cancer and their parents. The traditional approach of learned stimulus–response relationships is outlined with examples of behavioral therapeutic techniques. Based on the concepts of the cognitive and behavioral approach of emotions, we suggest an integrated model for psychosocial intervention. Three cases will be presented to show how the psychosocial intervention model can be applied in pediatric oncology.

Cognition and Emotions

Appraisal

Through cognitive appraisal processes, people evaluate the significance of events for their well-being. Lazarus and Folkman [18] distinguish three kinds of cognitive appraisal: primary, secondary, and reappraisal. Primary appraisal is the first assessment of the situation. If the situation is considered stressful, it can take three forms: harm/loss, threat, and challenge. At this moment, the person decides whether the situation is an emotional one or not [19]. This results in a number of emotions, or psychological reactions to events, depending on the relevance for the concerns of a person [19]. Positive emotions are evoked by events which correspond to what a person desires (safety, absence of pain). Negative emotions are evoked by events, which do not correspond to the needs or desires of a person (uncertainty, fear of loss, pain). In recent emotion theory, cognition is a determinant of emotional response through processes of “appraisal” or “meaning-analysis” [19]. Each specific emotion corresponds to a different appraisal, a different situational meaning structure. Every situation consists of different components. The component which is dominant for a person determines which emotion will arise. Shifts in dominance within the situational meaning structure lead to shifts in emotional experience. The negative outcome of medical examinations will raise uncertainty in a cancer patient followed by feelings of fear, while focusing on the progress in cancer treatment evokes subsequently feelings of hope. In the cognitive approach of emotions, the appraisal process not only refers to actual stimulus conditions but also to the associations of a person with the actual situation [20]. These associations are the cognitive representations that refer to the component that dominates in the situational meaning structure. For instance, a cancer patient who has experienced the death of a fellow patient after he or she was removed to a certain room may easily feel fear remembering this event when moved to this room some time later. This associative process can be understood in terms of classic conditioning. Associative learning is conceived as a basic principle in contemporary classical conditioning. For instance, empirical study on the acquisition of phobic fears revealed that cognitive representation of a conditioned stimulus (CS) with an unconditioned stimulus (UCS) evokes a conditioned response (CR)—not only in a sequential relationship (an event predicts the occurrence of an other event) but also as a referential relationship (an event activates the memory of an earlier event) [21, 22]. Therefore, analysis of the cognitive representations present in the appraisal of the situational meaning structure of a person is of importance in psychodiagnostics, prior to psychosocial and/or psychotherapeutic interventions [21, 23].

Appraisal by Children with Cancer and their Parents

The components, which are important in the appraisal of the situation for children with cancer and their parents, are uncertainty, uncontrollability of the situation, responsibility, the restriction of freedom, and the long duration of the situation [24]. In the case of children, the appraisal of the situation is highly dependent on the rapidly changing developmental level. Uncertainty about the course and the outcome of the disease is a condition related to hope and fear. Indications pointing to a remission of the disease contribute to a feeling of hope and trust, while indications of a relapse or recurrence of the disease evoke feelings of fear that all efforts to find a cure will be unsuccessful. Feelings of uncertainty about the future and fear of a relapse are often reported by parents of children with cancer [12]. In the first major study on surviving childhood cancer [25], it was shown that the uncertainty of parents was one of the major concerns. Parents of childhood cancer survivors were mainly uncertain about the long-term effects of the treatment and the possibilities of a relapse. Being confronted with cancer means being in a situation of uncontrollability, which easily evokes
feelings of helplessness. Children and parents cannot influence the disease or the treatment process very much. This is in the hands of doctors and nurses. The child has to undergo painful medical procedures while parents stand by helplessly. In reaction, children can easily develop avoidant and/or resistant behavior if the child or parent does not perceive an end to the suffering. High levels of depression have been reported if the child or parent feels they are able to hold on in spite of all difficulties. Considering the situation-specific process, it may also be presumed that coping is susceptible to changes and sensible to interventions. Frijda [19] stresses the importance of regulation. People not only have emotions, they also handle them. Regulations refer to all processes that have the function of modifying other processes induced by a given stimulus situation. Parents of children with cancer have few possibilities to regulate events, but they have the ability to regulate appraisal. The appraisal of a situation can be regulated by selective attention and self-serving cognitive activities. These appraisal regulations are comparable to emotion-focused coping strategies. Appraisal regulations are part of the emotion process. One of the best-known appraisal regulations is the use of denial. Individuals facing a life-threatening illness often go with cancer, the stimulus “take your medicine” can easily be associated with traumatic memories of a “struggle” with an impatient nurse in the hospital and may evoke anxiety originally emanating from uncontrollability.

For parents, seeing their seriously ill child with symptoms comparable to a fellow patient can be associated with images about a fellow patient dying and evoke thoughts about the possible death of their own child.

Coping

Emotions are not only evoked by appraisal of what a situation may do to a person, but also by the appraisal of what a person can do to change that situation. Cognitive appraisal and reappraisal are the first stage in coping; how a person deals with a stressful situation. One’s perceptions, or cognitive appraisals, are an important element in regulating distress (emotion-focused coping) or managing the problem causing the distress (problem-focused coping). Problem-focused coping involves direct efforts to ameliorate the problem causing the distress, whereas emotion-focused coping is directed towards regulating affects surrounding a stressful experience [18]. Coping should not be equated with mastery over the environment: many sources of stress cannot be mastered, and effective coping under these conditions is that which allows the person to tolerate, minimize, accept, or ignore what cannot be mastered. It should also be recognized that coping is, to some extent, a temporally and situation-specific process. Consequently, coping is defined by Lazarus and Folkman [18], as “constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of a person” (p. 141). The definition is process-oriented: the efforts and strategies are constantly changing. Considering the situation-specific process, it may also be presumed that coping is susceptible to changes and sensible to interventions.
through a phase of denial; they try to protect themselves from painful or frightening information related to external reality [32]. Whether denial is a negative force or can be considered as adaptive is a point of controversy. Denial can be useful, but in the long run, denial can also lead a patient to conceal serious physical complaints. This is the difference between denial of facts and denial of implications [33]. In patients who are able to function effectively and are able to maintain a high degree of optimism, behavior which may be viewed as denial can also be viewed, from a cognitive viewpoint, as “selective information processing” or can be considered as healthy denial [34]. The term “resilience” has been introduced to bridge the gap between the differing viewpoints. It describes the strengths and abilities of patients and families who can “bounce back” from the stress and challenges they face and eliminate, or minimize, negative outcomes [34, 35]. Many health care providers know that patients or families show the ability to adapt to stress and to be able to cope with a threatening situation. This capacity to keep on going is what is meant by “being resilient.” In relation to this, Folkman and Moskowitz [36] stress the importance of positive affect which co-occurs with distress. Especially positive appraisal (cognitive strategies for reframing a situation to see it in a positive light) appears to be an important kind of coping that determines positive affect.

Another area which has received considerable attention in the research on coping with cancer is the importance of turning to others for social support. Social support affects coping in several ways. Social resources can reinterpret the meaning of the situation so it seems less threatening, or it may influence the use of other coping strategies, e.g., provide distraction. Social support is therefore considered a coping resource by several researchers [37, 38].

**Control Strategies**

Rothbaum, Weisz and Snyder [17] emphasize the concept of uncontrollability in their two-process model of perceived control, separating primary and secondary control strategies. Primary control strategies are classified as attempts to gain control by bringing the environment into line with their wishes (e.g., seeking treatment, changing one’s own and other people’s behavior). Secondary control strategies are attempts to gain control by bringing themselves into line with environmental forces (e.g., seeking explanations and changing expectations or attitudes). This is similar to the classification of problem- and emotion-focused coping strategies [18]. Rothbaum, Weisz and Snyder [17], however, further classified control into four strategies: (1) predictive; (2) vicarious; (3) illusory; and (4) interpretative, all possibly used in primary or secondary form (Figure 9.1). These four control strategies well describe the frequently occurring reactions of children with cancer and their parents.

**Figure 9.1** Primary and secondary control strategies.

<table>
<thead>
<tr>
<th>PRIMARY CONTROL</th>
<th>SECONDARY CONTROL</th>
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<tbody>
<tr>
<td>predicts events to be</td>
<td><strong>Predictive control</strong></td>
</tr>
<tr>
<td>prepared for them</td>
<td>anticipate disappointments</td>
</tr>
<tr>
<td>manipulate powerful</td>
<td><strong>Vicarious control</strong></td>
</tr>
<tr>
<td>others or imitate them</td>
<td>associate with powerful</td>
</tr>
<tr>
<td>influence chance-</td>
<td><strong>Illusory control</strong></td>
</tr>
<tr>
<td>determined outcomes</td>
<td>associate with chance</td>
</tr>
<tr>
<td>solve problems or master</td>
<td><strong>Interpretative control</strong></td>
</tr>
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<td>them</td>
<td>derive meaning from</td>
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<td></td>
<td>problems and accept them</td>
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**Predictive Control**

Strategies of primary predictive control include gaining knowledge about the expected course of the disease, of the treatment schedule, and the side effects of treatment. The gaining of knowledge in the case of primary predictive control focuses on everything that can contribute to prediction and can satisfy the need to know what to expect. In predicting events, a feeling of control over the situation is created. Secondary predictive control involves attempts by a child or the parents to predict events to avoid disappointment. Most striking in this way of coping with the threatening situation are parents who react with “anticipatory mourning” while the treatment of their child is still curative. By predicting and grieving about a “certain” loss, they prevent themselves from feeling the shock and pain related to the possibility of the death of their child. This type of parental coping is regularly found in clinical encounters, but was not representative of the group of parents of children with cancer participating in our own study [39], in which the parents protected themselves more by being optimistic than by preparing themselves for disappointment. Secondary predictive control can apparently manifest itself in two ways. On the one hand, parents can protect themselves against disappointment by expecting the worst, but, on the other hand, they can also protect themselves by having positive expectations. By living day to day and by being optimistic, children and parents may try to control their emotions. Such manifestations of secondary predictive control can also be considered as forms of healthy denial or attempts to reframe the situation in a positive light [36]. In our own study [40], we found that persistence in being hopeful, that is having positive expectations, proved to be the major predictor of positive emotional outcome for parents of children with cancer.

The same findings were shown for children with cancer [41]. We found no differences between children with different prognosis (in remission or with a relapse) either on measures of anxiety and depression, or on measures of cognitive control strategies. Emotional adjustment of the children was predicted by defensiveness and by positive expectations about the course of the illness. These findings demonstrate again that having positive expectations about the course of the illness are of major importance for the emotional adjustment of children with cancer.

**Vicarious Control**

Vicarious control can be exercised by trying to imitate or manipulate powerful others (primary form) or by attempts to associate with them (secondary form). Children with cancer and their parents are highly dependent on doctors. Their attempts to influence the doctors’ choices can especially be seen when treatment is not successful and the survival perspective is reduced. Trying to avoid the possibility of death, parents may try to convince the doctor not to terminate treatment, or to use experimental therapies. The secondary manifestation of vicarious control is demonstrated by attributing special power to the doctor, on whom all hope is focused. In this case, a sense of control is derived from the perception that others, such as the medical caregivers, can exert control. We know from clinical experiences and written diaries how important medical caregivers are to parents and children. An example of this is found in the diary of a girl treated for leukemia [42] who wrote, after hearing the diagnosis: “I am in the best hospital now, with the best professor in the Netherlands” (p. 15).

**Illusory Control**

Illusory control is used to attempt to influence chance-determined outcomes or as a secondary process, to associate with chance. Attempts to influence the chance-determined outcome of the illness can be sought in changes in lifestyle, eating habits, or alternative healthcare. These actions offer children and parents the possibility to do something themselves, and thus promote a sense of control. Our finding of increased use of alternative treatment by families of children with cancer in relapse can be considered as indicative of the use of this type of control [43]. Secondary illusory control is found in children and parents when they put their situation down to fate, admitting that fate is more powerful, but create the illusion that fate will be kind to them. Hoping for a miracle, wishful thinking, or attributing special characteristics to the child as proof that the child is one of the survivors are illustrations of illusory control in its secondary form. An example of this is a mother who says: “I am sure my son will survive his illness. I know this because his astrological sign is the lion.” Bull and Drotar [44] found that children with cancer who are off-treatment frequently used intrapsychic coping strategies. They often used praying, wishful thinking, or self-encouraging statements to deal with cancer-related stress, which can be considered as secondary illusory control. In a study, we administered a questionnaire measuring all four cognitive control strategy scales to several children with chronic diseases and their parents participating in research in our department. Based on these findings we know that parents of children with cancer rely more on illusory control than parents of children.
with other chronic illnesses [41]. Reliance on wishful thinking appears to be very important to them. By attributing positive characteristics to their child, parents create an image of the child as being full of life, hence fostering the illusion that fate will be kind to them. The parents need to believe that the child is strong, because if the child can handle the situation, it increases their confidence that the child will survive. We found support for parents’ attribution of positive characteristics to their children with cancer. We discovered that parents of children with cancer attributed more cheerful behavior to their children than parents of children with asthma and healthy children do [45].

**Interpretative Control**

Primary interpretative control is focused on understanding problems so as to be able to solve them or otherwise master them. Gaining information about the disease and the different treatment modalities is often seen in children and parents and is obvious around the time of diagnosis. Empirical research confirms that the majority of older children prefer to be informed about their disease and treatment [46]. Secondary interpretative control refers to the search for meaning and understanding. Finding an answer to questions like “What caused cancer in my child?” and “Why did this happen to me?” serves the process of acceptance and helps children and parents to find meaning in the cancer experience. Attempts by parents to search for information on the internet is also an example of interpretative control. In our study on the use of the four secondary control strategies by parents of children with cancer, we found that all the parents [39] used secondary interpretative control most frequently. The use of interpretative control appears to be important, regardless of educational level and survival perspective. Although mothers of children with cancer relied more on interpretative control than fathers, interpretative control seemed to be meaningful for all parents. The cognitive approach of emotional reactions is in addition to the traditional behavioral approach. In the behavioral approach, all behavior is conceived as learned stimulus–response relationships. The process of learning is governed by principles of classic conditioning [47], operant conditioning [48] and imitation [49]. In classical conditioning, a reflexive response to a stimulus is brought under control of another stimulus by the contiguity of both stimuli. An example in pediatric oncology of this principle is found in the child already vomiting at home when he has to go to the hospital to get a chemotherapy cure with nausea-evoking drugs. In operant conditioning a specific stimulus is brought under control by consistent reinforcement of a response that follows the specific stimulus. In operant conditioning, behavior is determined by its consequence, using the principle of contingency. This principle is working in the example of the child having learned that he will hear his favorite story after taking his medicine. Observation of behavioral sequences in others can also establish behavior. The observer learns to associate certain responses with the observed conditions, providing a basis for imitation when the observer is in a similar position as the model. Children with cancer learn a lot from their fellow patients. Observing another child in the ward during chemotherapy can serve as a role model in a positive but also in a negative way.

**Application of Behavioral Therapeutic Techniques**

The use of the learning principles underlying the behavioral approach has been shown to be beneficial to the child with cancer, in particular in handling anxiety- and pain-provoking treatment procedures (e.g. venepuncture, bone marrow aspiration, lumbar-puncture, infusion of chemotherapeutic drugs and/or operations). Besides improvements in using anesthetics and nausea-reducing drugs, the application of behavior therapeutic techniques remains important in many cases. The possibilities of the behavioral approach have been extensively described (e.g. [50, 51]). The main techniques used are summarized in Figure 9.2.

Pre-exposure prevents the child from aversive conditioning through exposure to possible anxiety-provoking stimuli at a moment when the child is quiet and relaxed. This technique is useful as a method of preparation and only applicable in situations with a high probability of occurrence and low stress intensity, as for instance in children who will undergo radiotherapy or general anesthesia. Showing a book of photographs of a medical procedure and/or showing the room and apparatus for examination or treatment are supportive

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**Figure 9.2** Anxiety- and pain-reducing techniques.
in using this type of intervention. With positive reinforcement, parents and medical caregivers can encourage cooperative behavior. Social reinforcement through approval can be completed with material reinforcers after undergoing medical examination or treatment. Relaxation and breathing exercises are useful in decreasing the activity of the sympathetic and motor nervous system in tense situations. In learning and encouraging the child to use these techniques during medical procedures, the level of experienced anxiety and pain can be reduced. Modeling videos are used to inform the child about a stressful medical procedure and also to teach the child techniques (such as relaxation or self-distraction) to remain in control during the event. When watching the video the child is encouraged to imitate the behavior of the model child shown in the video. Systematic desensitization (SD) is used in the case of a child reacting with extreme avoidant behavior. SD involves the composition of a hierarchy of increasingly anxiety-provoking stimuli. Step-by-step exposure to these stimuli, together with a corresponding response such as relaxation, reduces the level of anxiety and the tendency to react with avoidance. With guided imagery the child’s attention is distracted from the aversive medical procedure by a fantasy story unrelated to the painful event. This technique has proved to be successful in children and adolescents who are sensitive to suggestions. It is preferable to agree with the child on a story he or she likes. If a child likes Superman, invite him to identify with Superman in solving problems and challenges. In practice, the above-mentioned techniques are often used in combination [52]. For instance, pre-exposure to the radiotherapy room is often followed by instructions on how to relax. When doing so, it can be agreed with the child that a distracting story will be told during therapy and then to positively reinforce the child after treatment. Kazak et al. [53] integrated the above-mentioned stress reactions and interventions in a model to assess so-called pediatric medical traumatic stress (PMTS). In this model, for each phase of the treatment, guidelines for recognition of PMTS and suggestions for using materials and cognitive-behavioral techniques aimed at reduction of PMTS are described.

The Psychosocial Intervention Model

Framework

The main characteristics of the situation, the different emotions, the types of primary and secondary control and the history of learned behavior are brought together in a model for psychosocial intervention (see Figure 9.3).
This framework addresses the main features of the situation, the related emotions, the role of primary and secondary control, and also the history of learned behavior. In coping with a stressful situation, children and parents use the various control strategies in their specific way. Psychosocial intervention is indicated if control fails and subsequently, child and/or parents need support in rebuilding their defenses or to reduce or eliminate unpleasant behavioral reactions. Using this scheme, we can analyze and understand the emotional reactions of the child and his/her parents and use it as a guide to psychosocial interventions. In working with this model, we ask the following questions: (1) What situational components and emotions are dominant for the child and the parents? (2) Which control strategies are especially used by the child and by the parents?; (3) What is the history of learned behavioral reactions related to the disease and the treatment?; (4) To what extent do the child and parents use their control strategies effectively? If, for instance, child and/or parents are anxious about the course of the disease and mainly attempt to use interpretative control to reduce uncertainty, we have to look critically at the information they have been given about the disease and the treatment. If child and/parents fear a negative outcome of the disease and show little confidence in the medical doctor, it may be necessary to enhance their vicarious control. And, also, if the child remains anxious about a treatment procedure, it makes sense to look at his history of learned behavioral reactions and use specific behavioral therapeutic techniques to overcome this fear (as is shown in the Jim’s case study below).

Case Studies

EXAMPLE: MARIA

Maria is a 7-year-old girl and has been treated for osteosarcoma. She has had an operation and has had post-surgical chemotherapy. She lost her hair due to chemotherapy. The tumor was removed and she is in remission. She only comes to the hospital for check-ups and whether the disease will remain in remission is uncertain. Maria is bald, but very full of life. She goes to school with pleasure. Her parents came to the Pediatric Psycho-Social Department with the complaint that Maria has trouble sleeping. She calls for her parents from her bed, and ends up sleeping with her parents. Her parents are not able to sleep well, and especially her father is exhausted. In Maria’s case we wondered why she was afraid to be alone in her bed. We wondered what associations the parents may have had when Maria went to bed, and what associations when Maria called them at night.

Situational Components

Because Maria is young, her feelings of certainty are very dependent on her parents. After inquiry, it turns out that Maria woke up from her operation earlier than expected and that her parents found her very upset. Consequently, when she is alone in her bed, she feels uncertain. The appraisal of the situation as uncertain concurs with Maria’s association of being alone in her bed and the uncertainty about whether her parents are available. Maria’s father appraises the situation as uncertain. Would Maria survive her illness? Because her illness started with pain in her belly, before going to bed, father urges Maria to call them if she feels something in her belly. Maria’s mother has confidence in Maria’s treatment and her uncertainties mainly relate to her husband’s worries and Maria’s sleeping problems.

Control Strategies and Effectiveness

Maria does not know whether her parents are available, and she is not sure about her illness. It seems that she has little possibility of relying on interpretative control. Maria’s mother is confident (secondary predictive control: positive expectations) that Maria will survive her illness. She says that Maria is an optimistic and strong girl who will be able to survive her illness (secondary illusory control: attribution of positive characteristics). Maria’s father worries about her illness and he is anticipating a negative outcome. He thinks Maria will not survive (secondary predictive control: negative expectations). After inquiry, it turns out that his father (Maria’s grandfather) died of cancer 6 months earlier and that Maria’s father has not come to terms with this. There also appears to be an important association influencing the appraisal for the father: “When I see Maria sleeping, it is like seeing my father on his death-bed.” For the father, Maria’s going to sleep appears to be a conditioned stimulus triggering anxiety arising originally from uncertainty about the outcome of the disease. Maria’s father appears to be wanting Maria to get out of her bed; it reassures him temporarily.
**Intervention**

Having analyzed the situation, we now know more about the cognitive representations and emotional reactions of Maria and her parents. In the first place, Maria should be helped to increase her feeling of safety, and it should be explained that she is in remission and not ill right now (increasing her interpretative control). She should know more about her illness. The main psychosocial support should be directed at the father. His mourning for his father should be discussed and supported to break the association between his dying father and his sick daughter. Maria’s symptoms should no longer be negatively predicted by the father.

**EXAMPLE: MICHAEL**

Michael is a 12-year-old boy suffering from a non-Hodgkin lymphoma. He is tall for his age and looks older. His cancer is being treated with intensive chemotherapy over a long period of 53 weeks. At the moment of referral to the Psycho-Social Department he was in the 22nd week. Michael is rebellious in the hospital and is non-compliant with protective rules of his therapy (e.g., brushing his teeth and rinsing his mouth). He is also abusive to his mother and the nurses in the ward. His parents feel helpless and are tired of all the quarrels.

**Situational Components and Emotions**

Michael is a popular teenager who feels very frustrated by the restriction imposed on his freedom by his illness. He is directing his frustration and anger especially at his mother. His mother believes she cannot control the situation and feels helpless. She also feels responsible towards the nurses for Michael’s behavior, which causes her to experience guilt, together with being angry at Michael. Michael’s father admits that he is very uncertain about Michael’s survival chances and the father admits he only cries when he is alone.

**Control Strategies and Effectiveness**

Because Michael seems older than he is, it is easy to assume he understands his illness and treatment. Michael does not really know the consequences of his disease (little interpretative control) and he relies little on vicarious control, resulting in rebellious behavior against the hospital staff. Because Michael is non-compliant with his treatment schedule, his treatment protocol cannot be followed as well as it should be. Little primary predictive control is therefore possible for his mother. His mother has a great deal of confidence in the hospital (secondary vicarious control). That Michael’s father is the most pessimistic of the family shows that he is anticipating disappointment (secondary predictive control).

**Intervention**

The family needs a better understanding of the treatment, survival chances, and consequences of non-compliance. Therefore, a meeting with the physician was organized. This enhances the interpretative control and vicarious control of all family members. In this round-table discussion, the effects of the medication Michael is taking were also discussed. The use of dexametason is known to cause mood disturbances. Because Michael has difficulties with the restriction of his freedom he was supported in finding an alternative to playing football. He is being supported in doing something together with his father.

**EXAMPLE: JIM**

Jim is a 6-year-old boy highly anxious and angry about undergoing his chemotherapy. “I don’t want it,” he cried. The doctors gave Jim sedative medicines before the infusion was installed. Nevertheless he remained very upset and frequently tried to eliminate the infusion. Psychological intervention was requested. In discussion with Jim and his parents it became clear that Jim had experienced a traumatic sequence with his first chemotherapy. His mother was late arriving at the ward because of a traffic jam, the doctors had already started Jim’s first infusion. A nurse
Conclusion

The model for psychosocial intervention presented in this chapter is meant to be a helpful instrument in arranging and analyzing the findings from previous diagnostic efforts. The model presented, emphasizes the importance of the characteristics of the situation, the main primary and secondary control strategies, and the history of learned behavioral reactions. These aspects are involved in analyzing the emotional and behavioral reactions of children with cancer and their parents. It is important that health care providers understand emotional and behavioral reactions, and coping strategies, because with this knowledge they can respond more appropriately. If health care providers respond adequately, this will be beneficial to the children’s and parents’ emotional adjustment. The focus on the described control strategies is not meant as an exclusive point of view. Children and parents also rely on other coping strategies (e.g. classical defense mechanisms) or other coping resources (social and financial support). To understand emotional and behavioral reactions, careful diagnostics are necessary. In many cases the child’s and/or the parents’ emotional problems or problems of adjustment cannot easily be attributed to cause and consequence. We also have to keep in mind that parents and children may rely on more than one control strategy at the same time and that the same person or situation may generate different feelings of control. This is also important to realize when arranging interventions. The model serves as a guideline to hypothesize about the occurrence and origins of psychosocial adjustment problems of the child with cancer and his parents. Based on these hypotheses, focused interventions can be initiated.

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