A psychosocial perspective on pediatric functional abdominal pain: risk factors and treatment

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Chapter 9

General discussion and summary
Tuesday, September 8th 2009, 12.00 am, de Bascule, Amsterdam.
Downstairs, in front of the psychiatry building, Elin and her mother are waiting for Elin’s father to get the car from the parking garage. Her pain is too intense right now to walk to the car. While they are waiting, Elin thinks about all of the things that have been discussed. It was a lot. It’s a pity that the psychologist wouldn’t write an excuse note for gym. Well, nothing to it than going to gym class this afternoon, then, Elin thinks, feeling depressed. Maybe I can be the goalkeeper with soccer, or catcher with softball. The psychologist was a little strange, wearing jeans and no white coat, Elin thinks. And she was so young. But also sort of nice. Elin wonders whether the exercises she should practice, are really going to help her. She asks her mother, who replies that she doesn’t know, and that they’ll have to wait and see. Elin takes a deep breath, and remembers just in time that she has to breath by moving her abdomen now, not by moving her chest. That feels funny. But also kind of pleasant. Maybe practicing at home is not such a bad idea.

The present thesis aimed to study the effectiveness of a psychosocial treatment for children like Elin who suffer from functional abdominal pain (FAP). In addition, throughout the first part of this thesis, we investigated whether a number of psychological and social factors play a role in the well-being of children with FAP. Where Elin is just starting her treatment, at the end of this thesis we have arrived at a beginning of understanding how to best treat children with FAP. The present chapter summarizes and integrates the findings of the different chapters and will set out future directions for research and practice.

Summary

Part I: Psychosocial risk factors for pediatric FAP
The first empirical study of this thesis is described in chapter 2, and focuses on the prevalence of abdominal pain and its relationships with other physical and psychological complaints in a community sample of schoolchildren. Additionally, it was investigated whether occurrence of AP in this sample coincided with parental physical and psychological complaints, as is often found in pediatric FAP. A large sample of schoolchildren aged 7-18 (N=665) filled out questionnaires, and a total of 391 of their parents also participated. The results of this study showed that AP was frequent in this school sample, with 56.5% of the children reporting AP at least once in a two-week period. Largest relationships with AP were found for female gender, younger age, activity limitations, other somatic complaints.
and depressive symptoms. The relationship between anxiety and AP was only small in this sample, which contradicts findings from clinical studies in children with FAP (Campo et al., 2004). Also, parental physical and psychological complaints were unrelated to child reports of AP, in contrast to what is usually found in children with FAP (Levy, 2011).

The relationship between parental physical complaints and FAP, and the influence of parental behavioral reactions to the child’s complaints, was further investigated in a systematic review and meta-analysis described in chapter 3. The aim of this review was to investigate whether parents maintain or exacerbate the complaints of their children through modeling of physical symptoms and solicitous responses to the child’s complaints. We found that parents of children with FAP reported more physical symptoms than parents of healthy children, but this difference was only small. Additionally, as all studies were cross-sectional or retrospective, the causal direction was unclear. For parental responses to child complaints, not enough studies were available to perform a meta-analysis. Moreover, half of the studies that were available, found no significant relationship with FAP. We concluded that the present literature is unfit to establish whether parents maintain or exacerbate pediatric FAP through the processes investigated.

Chapter 4 describes the results of a study investigating the level of emotion awareness of children with FAP and what type of coping strategies these children use when coping with everyday problems, compared to children with no AP and children with occasional AP. In addition, it was investigated whether coping mediates the relationship between emotion awareness and FAP. The results showed that children with FAP scored significantly lower on most aspects of emotion awareness than children without AP, although these differences were small. Contrary to expectations, children with FAP were more aware of a link between emotions and bodily sensations than children without AP. As for coping, we found that children with FAP used avoidant coping more often than children without AP, but coping was not a convincing mediator for the relationship between emotion awareness and FAP. It was concluded that children with FAP show only small differences in emotion awareness and coping compared to children without AP, and practically no difference when compared to children with some AP.

The objective of our fourth study was to investigate whether children’s or parental cognitions and coping behaviors more strongly contribute to a) having pediatric FAP and b) the physical and psychological well-being of children with FAP. As described in chapter 5, children with FAP and their parents were compared to a control group of 155 schoolchildren with occasional AP. Both groups filled out questionnaires concerning negative cognitions about the severity of the child’s condition, positive cognitions about the coping potential of the child, coping with AP, parental solicitous responses to AP, and the child’s level of AP, functional disability, anxiety, depression and quality of life. This study showed that both children’s cognitions and behaviors and parental cognitions were significantly related to FAP, although parental cognitions had a stronger relationship. In
contrast, children's cognitions and behaviors were more strongly associated with children's well-being than parent variables. Concrete displays of parental solicitous behavior were unrelated to either having FAP or the well-being of children with FAP. Children's coping behavior and positive thoughts were more strongly related to having FAP and to the well-being of children with FAP, than children's negative thoughts about their condition.

The final study for this part of the thesis described in chapter 6 focused on whether children with functional abdominal pain (FAP) show an attentional bias for information concerning the activity of their body. Additionally, as is suggested by Pennebaker's symptom perception hypothesis, we investigated whether being presented with information about bodily activity influenced perception of bodily sensations. Thirty children with FAP and thirty healthy children filled out questionnaires and performed a dot-probe detection task, in which children were shown sham pictures about their bodily activity. Results showed no attentional bias for gut-activity in either children with FAP or control children, although children with FAP were slower than healthy children on all supraliminal trials in which gut-activity was displayed. Children with FAP and healthy children showed an attentional bias away from supraliminal pictures about heart-activity. Thirty to forty percent of children with FAP experienced a light increase in abdominal pain after the experiment, which suggests that focusing on bodily activity may increase symptom perception. Overall, children with FAP only differed from healthy children concerning their responses to gut-activity, not concerning their responses to other bodily activity.

Part II: Cognitive behavior therapy for pediatric functional abdominal pain

Cognitive behavior therapy (CBT) is a promising treatment for pediatric functional abdominal pain (FAP), but solid evidence for its effectiveness is lacking. Chapter 7 describes the results of a randomized controlled trial, aiming to investigate the effectiveness of a six session protocolized CBT, compared to the effects of six visits to a pediatrician (medical care; MC). One hundred and four children aged 7-18 were randomized to CBT or MC. CBT was mostly delivered by trained master students in psychology, MC was delivered by pediatricians or pediatric gastroenterologists. Both CBT and MC led to a significant decrease in abdominal pain, but the treatments did not differ in their effectiveness. One year after treatment over 60% of children that received CBT had significantly improved or recovered, versus 56% of children receiving MC, which did not significantly differ. For secondary outcomes, it was found that directly after treatment and at six months follow-up, children that received CBT experienced fewer symptoms of anxiety and depression than children that received MC. As two different treatments led to similar results, more research into the working mechanisms of each treatment is warranted.

A first step into this research on working mechanisms is made in our final empirical study presented in chapter 8, in which we explored which factors moderate and mediate treatment effectiveness of CBT. Investigated moderators were age, gender, Rome III
diagnosis, time since start of complaints, anxiety, depression, emotion awareness, coping with everyday problems, parental functional gastrointestinal disorder, and parental stress, anxiety, depression and somatization. Investigated mediators were parental and children’s negative cognitions about AP and positive thoughts about coping potential, children’s coping with AP, parental solicitous responses to AP, and vigilance for pain. Results showed that children that were more likely to show their emotions and to seek social support for everyday problems prior to treatment, benefitted significantly more from CBT (about 80% effectiveness) than children scoring low on these variables (44%). Decreases in children’s negative thoughts about their condition were related to better treatment outcome for both CBT and MC. Increases in children’s positive thoughts about coping potential and decreases in parental solicitous behavior were related to better treatment outcome in CBT only. Concluding, CBT is more effective for children who are more likely to show their emotions and to seek social support prior to treatment. Changes in children’s positive and negative cognitions and changes in parental solicitous behavior may be mechanisms through which CBT exerts its influence.

Integration of findings

*Which psychosocial factors may be risk factors for pediatric FAP?*
Throughout this thesis, many psychosocial factors have been tested for their relationships with either the presence of FAP, or the psychological and physical well-being of children with FAP. Before describing our conclusions, however, I would like to stress that because the main objective of our research was to test the effectiveness of CBT for children with FAP, any investigations concerning risk factors could only be performed cross-sectionally by measuring these factors during the pre-treatment assessments. For a true investigation of whether a psychosocial factor is a risk factor for FAP, longitudinal or experimental studies are needed. We have compensated for this limitation to an extent by making comparisons with control groups, thus searching for factors that differentiate children with FAP from children with no abdominal pain and children with occasional AP of diverse etiology. However, while reading the discussion below, one should bare in mind that because of the limitations in design, all suggestions about causality are necessarily preliminary.

Nevertheless, the cross-sectional studies described in this thesis do provide clues for which factors are likely to be risk factors and which are not. For example, it seems unlikely that alexithymia/emotional awareness is an important risk factor, as it showed only small relationships with FAP, and the same holds true for the way children coped with everyday stressors. Also, we could find only small or no effects for parental solicitous responses and parental modeling of physical complaints in both our meta-analysis and our own empirical studies presented in chapter 2, 3 and 5. This result deserves special notion, as despite
the feeble evidence available, some experts in the field state that “Parental response to child pain behaviors appears to be a key factor in the development and maintenance of FAP” (Levy, 2011, pp. 1), and it has been suggested to develop interventions based purely on this factor, only ‘treating’ parents and not including children in the treatment. Clearly, the literature and the present thesis cannot support such an intervention.

Factors that were more strongly related to the presence of FAP and the psychological and physical well-being of children with FAP, were the way children coped with their abdominal pain, children’s and parental negative cognitions about the seriousness of the child’s condition, and their positive cognitions about the coping potential of the child. However, the note about causality mentioned above seems extra relevant for these factors. For example, some of the negative cognitions investigated were catastrophic thoughts like “My stomach aches mean I have a serious illness” and “I’ll always have stomach aches.”

Although theory suggests that these negative cognitions will increase the experience of AP, it is equally likely that a reverse relationship holds true, and that having more severe AP will prompt such thoughts. A likely scenario is that they constantly influence each other, resulting in a vicious circle. Also, the fact that we found that healthy children cope more actively with AP then children with FAP do, does not automatically mean that failing to use active coping is a risk factor for FAP, as here too the relationship can be reversed: active coping may be effective to reduce occasional episodes of AP, but may not effectively reduce chronic AP, and as such, children with FAP will cease to use active coping. Although most research on coping and cognitions in children with FAP is cross-sectional, there are a few studies that have employed a longitudinal design and found that coping and cognitions are related to outcome over time (Shirkey, Smith, & Walker, 2011; Walker et al., 2005, 2007). However, these studies are scarce, and more are needed to gain more insight into whether these factors may be risk factors for FAP.

A final risk factor investigated in this thesis that we did not yet mention, is information processing, and more specifically, whether children with FAP have an attentional bias for the activity of their body. We did not find convincing evidence for the presence of an attentional bias in the present thesis; in fact, the three studies including our own that up to now have been performed in children with FAP yielded very inconsistent results, with one study showing an attentional bias toward pain stimuli (Beck et al., 2011), the second showing evidence for an attentional bias away from pain stimuli (Boyer et al., 2006), and our study showing no evidence at all for an attentional bias. Chapter six does, however, show that attentional processes may play an important role in FAP, as we found that in 30 to 40% of children with FAP, AP increased following the dot-probe task during which children were confronted with information about their bodily activity. As this task lasted only about twenty minutes, it is surprising that such a short amount of time spent focusing on the body may increase symptom reporting. Of course, we cannot say for sure that focusing on the body caused this increase in AP, as it could also have been the stress of being in an
experiment. Nevertheless, the results deserve further investigation, especially because of its potential for developing new intervention strategies like decreasing interpretation and attentional biases using computer paradigms.

Concluding, the present thesis showed that coping with AP, parental and children’s cognitions about AP and information processing may be factors relevant to the continuance, exacerbation and possibly onset of FAP, whereas for emotion awareness, social learning and coping with everyday problems it is unlikely that they play important roles in the etiology of FAP.

**Treating children with FAP – the benefits of a supportive relationship**

The second aim of this thesis was to investigate the effectiveness of CBT in treating children with FAP. The most important conclusion that can be drawn from our RCT is that children with FAP can be effectively treated. Sixty percent of the children that were included in the RCT were significantly improved or recovered up to one year after treatment. However, what is also clear, is that it doesn’t seem to matter which of the two treatments was used, or whether treatment was provided by relatively inexperienced, trained master students in psychology, or by more experienced pediatricians and pediatric gastroenterologists. Both treatments resulted in approximately equal success rates: CBT significantly reduced AP in over 60% of children at one year follow-up, and MC reduced AP significantly in about 56% of children. However, one should bear in mind that the intensive protocol for MC used in this study is not representative of daily practice of a pediatric gastroenterologist or pediatrician, where patients are seen much less frequently.

One explanation for the similar effectiveness of CBT and MC may be that both used certain specific and unique therapeutic ingredients (e.g., the relaxation exercises used in CBT and medications prescribed in MC) that were equally effective. Also, both treatments had some similar ingredients like stressing the importance to go to school, although this was applied in a more structured way during CBT. However, we know from psychotherapy research that a considerable part of the treatment effect can be attributed to nonspecific treatment factors like a supportive relationship with a health care professional (Horvath & Symonds, 1991). As described in chapter 7, we feel that this supportive relationship is an important therapeutic ingredient that CBT and the intensive MC protocol had in common, and that this relationship may thus account for part of the similarity in effectiveness. Another result underscoring the relevance of this factor, was that 34 of the children that were screened for inclusion did not need any further treatment, because their AP was resolved after just one or two visits to one of our pediatricians. During those initial visits, children and parents were taken seriously: they received attention for and explanation about the complaints, diagnostic tests were performed when necessary, and they were treated kindly and with respect. Although one would expect that children would be treated as such by other health care professionals as well, one of the more unfortunate
conclusions we have to draw in this thesis is that this is not the case. Parents and children often said that they felt that previous doctors had not taken them seriously and had suggested that the pain was ‘all between the ears.’ The fact that so many children got better after just one consultation with one of the pediatricians, suggests that a lot can be gained from teaching pediatricians and general practitioners how to best respond to patients with functional complaints. A stepped care approach in which the first step is to take time for and listen to the patient and thereby validating their complaints, thus seems fruitful.

It should be noted that as the present RCT did not include a control condition in which no supportive therapeutic relationship was provided, we cannot test what percentage of the treatment effect can be specifically attributed to this factor. As it took three years to gather enough children for the present RCT, it would not have been possible to include another treatment arm like real standard medical care in this single center trial. However, we encourage future multicenter trials to try to quantify the effects of providing a supportive relationship in the treatment of pediatric FAP.

Is CBT effective, and how does it reach its effects?

In light of the discussion above, what can we say about the effectiveness of our CBT protocol? Should we stop using any specific techniques from now on and just sit down and talk with the patient, building a rapport, or does the specific content of the protocol bear additional value? Previous research provides some clues for the answer to this question. For example, the effects of CBT for pediatric FAP have been reported to be larger than the effects of purely receiving attention for the complaints (Levy et al., 2010). Additionally, interventions that for the largest part exclude the component of a supportive therapeutic relationship like internet interventions and guided relaxation through audiotapes, have been shown to have positive effects on decreasing AP in children with FAP (Hicks, von Baeyer, & McGrath, 2008; Palermo, Wilson, Peters, Lemandowski, & Somhegyi, 2009; van Tilburg et al., 2009). These results thus suggest that the techniques used in CBT also contribute to its effectiveness. However, what do our own data tell us about how CBT reaches its effects?

Chapter 8 provides part of the answer. Here we investigated which psychosocial factors changed due to or following CBT, and if a change in these factors related to a change in outcome. We found that CBT reduced children’s negative cognitions about their condition, increased children’s positive cognitions about their potential to cope with their pain, and decreased parental solicitous behavior, and that changes in these factors were related to changes in outcome. Thus, part of the effectiveness of CBT may indeed be attributed to changes in the factors that CBT focuses on. However, these relationships can also indicate a reverse causal direction, as the described factors may also change as a result of disappearance of the AP. One should note that the study described in chapter
8 was exploratory and the design was not suitable to formally investigate mechanisms of change, urging future studies to incorporate a more vigorous study design, including measuring change in mediating factors during treatment. Nevertheless, we may conclude that the specific content of CBT does seem to add to the treatment effect.

Another question we can ask ourselves about the effectiveness of CBT is: is it enough? How enthusiastic should we get about the 60% of children that were recovered or improved one year after follow-up? Although this is a promising result, it also means that 40% of children did not recover, which leaves ample room for improvement. Chapter 8 suggests how we may accomplish this to an extent, as this chapter showed that CBT was more effective in a specific subgroup of patients. For children who were more willing to show their emotions and who were more likely to seek social support when confronted with everyday stressors, CBT was significantly more effective at 6-12 months follow-up, with 80% improvement versus 44% in children scoring low on these factors. Thus, screening for such factors prior to treatment may be useful. In addition, this suggests that the treatment protocol may need adaptation for those children scoring low on these factors. This can be done by providing the intervention through the internet or through audiotapes, thereby offering them an intervention in which they do not have to share with others how they are doing. In light of the discussion above about the beneficial effects of a therapeutic relationship, we feel it would be highly interesting to investigate the effectiveness of such a stripped-down intervention for this subgroup of patients. On the other hand, exactly because of the potential benefits of a therapeutic relationship, the face to face therapy could also be adapted or expanded to help children deal with these specific difficulties.

Note that we did not investigate whether seeking social support and being reluctant to show your emotions changed during treatment. It is easily imaginable that CBT can have an effect on one's willingness to share emotions with others and to seek social support in the face of problems. So perhaps, the therapist delivering the CBT should pay more attention to this in the treatment of this subgroup of children. However, again one should keep in mind that the data presented in chapter 8 were exploratory and the relevance of social support seeking and hiding emotions as moderators of treatment effectiveness should be replicated before a screening as mentioned above is implemented in practice.

Finally, the attentive reader may have noticed that whereas not hiding emotions and seeking social support were significant moderators of the effectiveness of CBT for FAP, the first part of this thesis showed that these factors were mostly unrelated to FAP. Although these results seem contradictory, they actually are not, as it is likely that these aspects of coping and emotion awareness are relevant moderators of psychological therapies for any disorder, and not just for pediatric FAP (e.g., Lumley et al., 2007). In other words, not every factor that should be considered in the treatment of FAP, needs to be a risk factor for FAP. However, also note that because they have no large relationship with FAP, focusing on changing these factors in all children with FAP seems inappropriate. Another discrepancy
exists for parental solicitous behavior, which was found to be unrelated to being diagnosed with FAP and to the psychological and physical well-being of children in chapter 5, but was identified as a potential mediator of treatment effectiveness in chapter 9. An explanation for this finding is less obvious than for the moderators, because if solicitous behavior has no relation with AP, why would decreases in this behavior be related to decreases in AP? More studies discerning cause and effect seem warranted to shed more light on the relevance of changing parental solicitous behavior during CBT for FAP.

**Directions for future research and intervention**

At the end of this thesis, it is apparent that a number of voids in the literature remain that deserve attention. Concerning research, one of the most important recommendations we can make, is that more longitudinal and experimental research should be performed. Much of the literature on psychosocial risk factors for pediatric FAP is cross-sectional, as were our own studies. However, if we ever want to discern whether the psychological and social factors investigated in this thesis are actually maintaining or exacerbating factors, experimental and longitudinal research is needed. Experimental study designs are starting to be implemented in the research fields on parental influences (Goubert, Vervoort, Cano, & Crombez, 2009; Walker et al., 2006) and attentional biases (Beck et al., 2011; Boyer et al., 2006; chapter 6), but more studies are needed to validate these preliminary findings.

Another intriguing challenge for future research is how best to measure the concepts under investigation. First of all, our RCT showed that questionnaire data or diary data, although both self-reported, showed very different treatment effects directly after treatment, with success rates for CBT of 66.6% according to the diary data, and 30% according to the questionnaire data. This suggests that either the diaries overestimate the actual success of treatment, or the questionnaires underestimate its effect. Considering the problems accompanying diary data, with much missing data and children filling out a diary in retrospect for a whole week instead of daily like is intended, it is likely that the questionnaire data are more reliable, but these also suffer from the usual drawbacks of self-report. Although observation is always mentioned as an alternative to self-report, this is difficult for the subjective experience of pain. In the present study we asked parents to observe and rate the pain of their children, but parents often mentioned they found this difficult to do, especially those parents who had older children that did not talk as much about their pain with their parents. Thus, every single mode of measurement has its drawbacks and using multiple sources of pain rating as used in the present study is essential to get the most complete picture on the effectiveness of a treatment.

Similarly, for the two concepts of emotional awareness and attentional biases, it can be questioned whether the measures we used represent the concepts in the best
way. To start with the latter, many remarks can be made about the validity of the dot-probe task used in the present thesis and, in fact, about the dot-probe task in general when used in pain-related attentional bias research (Dear, Sharpe, Nicholas, & Refshauge, 2011). For example, one may wonder whether the pictures we used were clear enough to be processed at a subliminal level, whether they were threatening enough to elicit an attentional response, whether the curiously slow reaction times in response to leg-pictures indeed can be explained by characteristics of the pictures or by some other unknown effect, etcetera. More research is needed to validate this procedure, before we can conclude that the fact that we did not find an attentional bias, indeed means that no attentional bias is present in children with FAP. How to reliably measure emotional awareness is also an intriguing and difficult question. The present study used a validated self-report instrument, but thinking about the concept, it seems strange to use self-report for a concept measuring awareness. To be able to fill out such a questionnaire, one must be aware of not being aware of his emotions - this is an obvious paradox. The large body of research using self-report to measure alexithymia and emotion awareness seems to suggest that it is possible to measure these concepts by self-report, but it can at least be questioned whether this is correct, and efforts should be undertaken to measure emotion awareness on a more experimental level as was done in the studies by Jellesma et al. (2009) and Rieffe et al. (2004). Moreover, it should be noted that the literature on alexithymia and emotion awareness is confused, with ongoing discussions about its definition and the concepts that are embraced by these umbrella terms (Larsen, Brand, Bermond, & Hjijman, 2003; Lumley et al., 2007). This was also seen in the present thesis, where we found that a specific aspect of alexithymia/emotion awareness that seems key to its relationship with somatic complaints – the awareness of bodily sensations accompanying emotions – consistently shows relationships with somatic complaints that contradict alexithymia-theory. Alexithymia theory suggests that persons that are more alexithymic report medically unexplained symptoms, because they incorrectly attribute physical sensations that belong to an emotion to a physical disease and thus seek medical care for symptoms for which no physical disease can be found (Kooiman et al., 2004). However, our data showed that children with FAP had no trouble acknowledging that certain physical sensations accompany emotions. On the contrary, they were more aware of this fact than their healthy peers (chapter 4), which is in line with earlier research findings (Jellesma et al., 2006; Rieffe et al., 2007, 2008). This poses questions about the alexithymia concept as a whole, that should be sorted out in future research.

The present thesis also holds implications for future studies on treatment of children with FAP. In our opinion, the most important step forward is to investigate mechanisms of change of CBT to be able to improve and tailor the intervention, focusing on the mediators and moderators that were found relevant in this thesis. Additionally, as the treatment was successfully delivered by inexperienced trained master students in psychology, this
suggests that the treatment could perhaps also be successfully delivered by trained nurses or other health care professionals. This may reduce the possible stigma of having to go to a psychologist, although very few of the children in our study expressed that they had problems with this. Finally, another promising research avenue is to investigate whether CBT can also be successfully delivered through the internet, with or without contact with and feedback from a therapist. The nature of the present protocol, with only 6 sessions and clearly described goals, makes the protocol easy to convert to an internet format. Providing the intervention through the internet has the potential to make the intervention more accessible and could perhaps prevent children from coming in to secondary and tertiary care if the intervention could be disseminated from general practitioners’ offices. Previous studies on the effectiveness of internet interventions with therapeutic feedback for pediatric pain are promising (Hicks et al., 2008; Palermo et al., 2009).

A final implication for intervention that should be considered, is whether the fact that intensive MC was equally effective as CBT means that we should implement the intensive MC protocol in more hospitals in the Netherlands. The answer to this question seems to be no. At a presentation of the results of our RCT during a conference of the Dutch Society for Gastroenterology, the audience did not react enthusiastically to a suggestion made by the chairman that gastroenterologists should start to employ the intensive MC in their daily practice. This negative reaction may be because of time or financial considerations, as with the current health care system in the Netherlands, hospitals get a set amount of money for every child with FAP, irrespective of how often the pediatricians see these children. However, it is also commonly known that patients with medically unexplained symptoms are not popular among doctors, who often feel pressurized by the patient to perform more diagnostic tests and apply biomedical interventions. They generally feel that patients with medically unexplained symptoms are ‘difficult to manage’ (Reid, Whooley, Crayford, & Hotopf, 2001). In contrast to this view, studies show that patients mostly just seek to be reassured and understood and are not focused on additional diagnostic testing (Olde Hartman, Hassink-Franke, Lucassen, Van Spaendonck, & Van Weel, 2009). Thus, there seems to be a chasm between the way most physicians feel about patients with medically unexplained symptoms and about what they can offer them on the one hand, and what they can in fact, as underlined by this study, offer them on the other. Medical training up till now pays little attention to how doctors can effectively interact with patients with medically unexplained symptoms. Considering the beneficial effects of a good doctor-patient relationship found in this study, efforts should be undertaken to change physicians’ attitudes toward patients with medically unexplained symptoms, starting at medical school. This seems a more important, fruitful and feasible goal than implementing the MC protocol throughout hospitals in the Netherlands.
Conclusion

At the end of this thesis, we have arrived at a beginning of understanding how to best treat children with FAP like Elin presented in the introduction and at the beginning of this discussion. As is often the case, in our attempt to answer our primary research questions, we have raised many new ones. Nevertheless, we have also found some answers. Most importantly, we have shown that children like Elin can be effectively treated with a short, protocolized CBT. Although further evidence about the working mechanisms of CBT is needed to be able to improve and tailor the intervention, we hope to have made clear that sending children home with the message that they “will have to learn to live with it”, does not do justice to what we can provide them. Future researchers are encouraged to perform more longitudinal and experimental studies on psychosocial risk factors and treatment for children with FAP, to be able to help children like Elin more effectively in the future.