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Parental Expectations

Intercultural Perspectives and Parents of Children with a Mental Disorder

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1 ABSTRACT AND ZUSAMMENFASSUNG

1.1 Abstract

Everybody has experienced situations where he or she had expectations of what might happen or how others will behave. This is especially true for parents, as everyone with children has expectations for their child's life and behavior, or at least some hopes (Irwin & Elley, 2013). In general, expectations help us anticipate situations and be better prepared to react and adjust (Landis, Bennett, & Bennett, 2003). Up until now, knowledge was limited about how these expectations form, what influences them and how they interact with behavior, but there have been different approaches to studying this. A famous early model dealing with this topic is the theory of reasoned action (Fishbein & Ajzen, 1975), which was later refined into the theory of planned behavior (Ajzen, 1985). In this theory, the expectation of being able to show the intended behavior is one of the key-components. Another well-known model is the expectancy-value model of achievement motivation (Eccles et al., 1983), which states, an action is only taken if the expectation to achieve what is intended with such behavior is high enough. Different aspects named in the two previous models, as well as in following models have been suggested to influence the formation of expectations, like prior experience, cultural background and personal values (Nauck & Klaus, 2007; Rief et al., 2015).

So, expectations seem to play a major role in several aspects of life, and there have been confirming studies regarding associations between parental expectations and social behavior (Ohene, 2006; Padilla-Walker & Carlo, 2007), peer relations (Gurland & Grolnick, 2008) and academic achievement (Yamamoto & Holloway, 2010) of their child. While associations between parental expectations and children's behavior are known to exist, little is known about intercultural differences regarding parental expectations, parents of healthy children and parents of children with mental health issues. (Almroth, László, Kosidou, & Galanti, 2019; Eisen, Spasaro, Brien, Kearney, & Albano, 2004; Kortlander, Kendall, & Panichelli-Mindel, 1997). Nonetheless, in all of these studies the momentary actual status seems to have an influence on the expectations. The same applies to social norms, which are also present and serve as a baseline against which parents compare their own child.

This doctoral thesis aimed to narrow the gap in knowledge by examining and comparing parental expectations of German and Chinese parents (study 1). By analyzing data from 421 parents, we found these expectations to be at the same high levels in both groups, but expectations regarding academic achievement and emotion regulation were higher in Chinese parents. This leads to the assumption that culture indeed has an impact on the formation of expectations, which is also true for parental expectations regarding their child.

In the second study, we were analyzing the effects of parental expectations on children's academic achievement and vice versa, which is by far the best-researched area regarding parental expectations. Therefore, we collected all available studies to conduct a meta-analysis (133 studies, 437,328 parents) on this topic. Results showed parental expectations and the academic achievement of the child had a reciprocal effect. Still, the effect of expectations on achievement was larger than the achievement effect.

When looking at comparisons between parents of 214 healthy and 50 mentally ill children in study 3, we found between-group differences in levels of expectation on every scale, showing that having a child with a mental disorder is associated with lowered expectations. We could barely find the actual behavior shown by the child as a mediating factor, which might be due to small sample size. We also found the dispositional flexibility and tenacity of the parent to be associated with the level of parental expectations in the direction that higher tenacity, as well as higher flexibility were associated with higher expectations.

The results of this dissertation show that the assumed factors of cultural background and previous experience in the school context, as well as in the context of mental health, are relevant for building and revising parental expectations. Results of the second study also show the importance of parental expectations, as they have an impact on the outcome of a child and thus are specific factors to be addressed in parent-teacher communication, just like in parent-therapist communication.

1.2 Zusammenfassung

Jeder hat eine Menge Situationen erlebt in denen er oder sie bestimmte Erwartungen daran hatte, was passieren könnte oder wie andere Menschen sich verhalten werden. Dies gilt in besonderem Maße für Eltern, da jeder der Kinder hat auch gewisse Erwartungen über deren Leben und Verhalten hat, oder zumindest einige Hoffnungen und Wünsche (Irwin & Elley, 2013). Im Allgemeinen helfen Erwartungen dabei Situationen zu antizipieren, um dann besser vorbereitet zu sein um schnell reagieren und sich der Situation anpassen zu können (Landis et al., 2003). Bis zum jetzigen Zeitpunkt ist noch nicht vollends geklärt wie diese Erwartungen entstehen, was sie beeinflusst und wie sie mit dem Verhalten einer Person interagieren, aber es gibt verschiedene Ansätze dies zu erklären. Eines der berühmten frühen Modelle die sich mit diesem Thema beschäftigt haben, ist die Theorie des überlegten Handelns (Fishbein & Ajzen, 1975), welche später überarbeitet und zur Theorie des geplanten Verhaltens (Ajzen, 1985) wurde. In diesem Model ist zum Beispiel die Komponente der erwarteten Wahrscheinlichkeit ein Verhalten zeigen zu können eines der Schlüssel-Aspekte. Ein weiteres sehr bekanntes Modell ist das Erwartungs x Wert-Modell (Eccles et al., 1983), welches besagt, dass eine Handlung nur dann unternommen wird, wenn die Erwartung hoch genug ist, das gewünschte Ergebnis zu erzielen. Verschiedene Aspekte die in den beiden bisher genannten Modellen sowie in weiteren Modellen genannt wurden, scheinen einen Einfluss auf die Entwicklung von Erwartungen zu haben, wie zum Beispiel vorherige Erfahrungen, der kulturelle Hintergrund und auch persönliche Werte (Nauck & Klaus, 2007; Rief et al., 2015).

Es wird bereits ersichtlich, dass Erwartungen eine große Rolle in nahezu allen Aspekten des Lebens spielen und es gibt einige bestätigende Studien bezüglich des Verhältnisses zwischen elterlichen Erwartungen und dem Sozialverhalten des Kindes (Ohene, 2006; Padilla-Walker & Carlo, 2007), den Freundschaftsbeziehungen des Kindes (Gurland & Grolnick, 2008) sowie der schulischen Leistung (Yamamoto & Holloway, 2010). Obwohl es bereits diese bekannten Beziehungen zwischen elterlichen Erwartungen und dem Verhalten des Kindes gibt, weiß man bisher wenig über interkulturelle Unterschiede bezüglich elterlicher Erwartungen, sowie dem Vergleich von Eltern von psychisch gesunden und kranken Kindern, obwohl es für letzteren Vergleich immerhin ein paar Studien gibt (Almroth et al., 2019).

Diese Dissertation zielt darauf ab, diese Wissenslücken zu verringern und in der ersten Studie den Vergleich zwischen deutschen und chinesischen Eltern anzustellen. Bei der Analyse von 421 Personen fanden wir heraus, dass die Erwartungen dasselbe hohe Niveau in beiden Gruppen hatten, abgesehen von den Erwartungen bezüglich der Schulleistungen und der Emotionsregulation, welche in der chinesischen Stichprobe höher waren. Dies führt zu der Annahme, dass die Kultur tatsächlich einen Einfluss auf die Entstehung von Erwartungen hat und dies auch für elterliche Erwartungen an ihre Kinder gilt.

In der zweiten Studie analysierten wir den Effekt von elterlichen Erwartungen auf die akademische Leistung des Kindes und andersherum, welches bei weitem der am besten beforschte Bereich in Bezug auf elterliche Erwartungen ist. Aus diesem Grund haben wir hierzu eine Meta-Analyse (133 Studien, 437,328 Eltern) durchgeführt. Die Ergebnisse zeigten, dass elterliche Erwartungen und die akademische Leistung des Kindes einen reziproken Effekt hatten. Dennoch war der Effekt der Erwartungen auf die spätere Leistung größer als der Effekt des Istzustands auf die Erwartungen.

Beim Vergleich zwischen Eltern von 214 gesunden und 50 psychisch kranken Kindern in der dritten Studie, fanden wir unterschiedlich hohe Erwartungen in jeder untersuchten Skala, in die Richtung, dass Eltern von Kindern mit psychischen Störungen in jedem Bereich niedrigere Erwartungen hatten. Wir konnten nur zum Teil zeigen, dass das tatsächliche Verhalten der Kinder ein mediierender Faktor für diesen Gruppenunterschied ist, was aber an der geringen Stichprobengröße liegen könnte. Wir fanden auch heraus, dass die dispositionelle Flexibilität und Hartnäckigkeit der Eltern einen Einfluss auf die Höhe der Erwartungen hat und zwar so, dass sowohl höhere Flexibilität, als auch höhere Hartnäckigkeit mit höheren Erwartungen einhergehen.

Die Ergebnisse dieser Dissertation zeigen unter anderem, dass die angenommenen Faktoren, wie kultureller Hintergrund und vorherige Erfahrung, sowohl im Schulkontext als auch im Kontext von psychischen Erkrankungen, von Relevanz sind. Die zweite Studie zeigt auch die Wichtigkeit elterlicher Erwartungen, da sie einen Einfluss Leistung des Kindes haben und daher als besondere Faktoren in Eltern-Lehrer sowie in Eltern-Therapeut Gesprächen Berücksichtigung finden sollten, um den Schulalltag und die Therapie effizienter gestalten zu können.

2 THEORY

When talking about expectations, and especially parental expectations, it is important to know what exactly we are talking about. Therefore, a definition of expectations is needed. Next, I will focus on the different influences modulating expectations and, finally, come to the consequences expectations might have.

2.1 Definition of Expectations

There are different definitions of expectations that focus on different aspects. Still, they share a common core, being that expectations refer to something in the future. Most dissimilarities appear when looking more closely at the area the definition originates from. The variation is about expectations referring to oneself or to others (De Peuter, Van Diest, Vansteenwegen, Van Den Bergh, & Vlaeyen, 2011; Odhammar & Carlberg, 2015), whether the expectation is about a behavior or an event (Carr, Gibson, & Robinson, 2001) and whether expectations refer to the near or the far future (Curcio, 2008).

Combining these different approaches, a possible definition can be as follows: Generalized expectations can be defined as relatively stable assumptions about a certain future event or behavior (Carr et al., 2001), such as how other people will behave (Odhammar & Carlberg, 2015; Slepian & Ames, 2016). Situation-specific expectations are more variable. Usually expectations are made up of experiences from the past, social influences, and personal factors, and are often based on a broad variety of information (Rief et al., 2015; Swider & Babel, 2013). In addition, expectations are often higher than the past reality (e.g., Piquart & Ebeling, in press), unless they are related to a mental disorder, where they tend to be more negative (Rief et al., 2015).

Expectations are helpful; they facilitate the adaptation to situations, because one could prepare for those (Landis et al., 2003). They are additionally useful because one displays certain behavior in order to live up to expectations (e.g., Fan & Chen, 2001; Friedrich, Flunger, Nagengast, Jonkmann, & Trautwein, 2015; Jussim & Harber, 2005).

2.2 Models Referring to Expectations

In the following section I will summarize three important models referring to the formation, the change and the impact of expectations. Those models are all of high relevance in psychology and are not limited to developmental psychology. They gained a lot of attention because they have the potential to explain why behavior is shown or not. Namely the three models are the theory of planned behavior (Ajzen, 1985), the expectancy-value-theory (Eccles et al., 1983) and the fairly new ViolEx-model (Rief et al., 2015). All of them explain, in more or less detail, how expectations are formed and the latter one also explains whether expectations are changed.

2.2.1 Theory of Planned Behavior

The first theory I will discuss, including expectations as an important factor for performing actions in a certain way, is the theory of planned behavior. Originally introduced by Fishbein and Ajzen (1975) as the theory of reasoned action, this theory received a lot of attention.

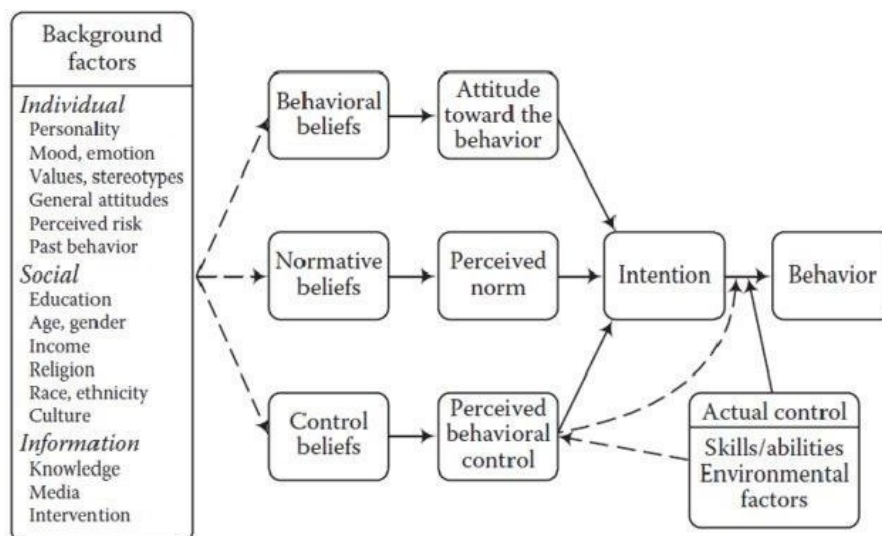


Fig.1: The theory of planned behavior (Fishbein & Ajzen, 1975; in Antawi, 2016, p. 3).

It was one of the first theories to include multiple background factors that influence different beliefs. Background factors in this context refer to three categories: individual factors, social factors and previous information. These categories include several facets. Personality is one example of an individual factor and might be important when it comes to interpreting a situation (Costa & McCrae, 1992; Jafri, 2014). Being a shy person in the context of a school environment, a person might be more reluctant to

raise their hand even though he or she expects to know the answer, while a bolder person would raise their hand despite being unsure of the correct answer (Coplan & Rudasill, 2016). Another aspect of the category of individual factors are values and stereotypes. A person believing in the stereotype that people from Asian cultures are more reserved when it comes to open displays of emotions will probably behave differently towards people from that culture than a person with no prior knowledge of the culture (Berger, 2018). But in this theory, not only do stereotypes about a culture influence beliefs, but the culture a person comes from or lives in also has a direct influence and is one of the social factors. Sticking to the previous example, when living in a culture that is to some extent strict about showing emotions, one will tend to act according to these social norms and thus be rather restrained than a person in a society where emotions are used as part of everyday communication (Hareli, Kafetsion, & Hess, 2015). This is relevant to the first study conducted in this doctoral thesis, where intercultural differences regarding parental expectations were assessed. The third category, summarized under background factors, is information. It is obvious that a person can only behave according to the rules of a culture if he or she knows them. A way to obtain this information is first via family and friends. Coming back to the example of stereotypes, it is especially true in our time that media has a big influence on us as well.

All these background factors lead to the formation of different beliefs. These beliefs exist at three different levels: behavioral, normative, and control. The behavioral belief defines the attitude towards the behavior, which can be described as the expectation of how valuable the action would be. This refers to the value for oneself as well as the impact it could have on others. This is another important aspect for the first study, as knowing the effect one's behavior could have on others is a strong motive to act or not to act in Asian cultures (Butler, Lee, & Gross, 2007). This is why expectations play an important role in this early theory, although they are not explicitly stated. Their role is not only hidden in the attitude towards behavior, but also in the perceived behavioral control, as this resembles a person's expectation to be able to influence the situation and the outcome. Combining these two with the normative beliefs, which can be translated into the expectations one has of his or her behavior in the context of the given norms, one then forms the intention to take action. This points out the immense value expectations have in this theory, because although the expectations are

influenced by a lot of different factors, it is finally them which are requirements of every planned behavior.

2.2.2 Expectancy-Value-Theory

Another famous theory describing the influence of expectations on behavioral outcomes is the so-called expectancy-value-theory, developed by Eccles et al. (1983). This theory was originally developed to explain how and why students keep up motivation to learn and show good performance. Simply looking at the name of this theory reveals why this theory has to be included in work dealing with expectations. An important addition to this theory is the mathematical implication this model assumes, which will be explained in more detail at the end of this section. There is no doubt, both theories share similar elements in explaining the role of expectations and the value of an action as necessary for any behavior.

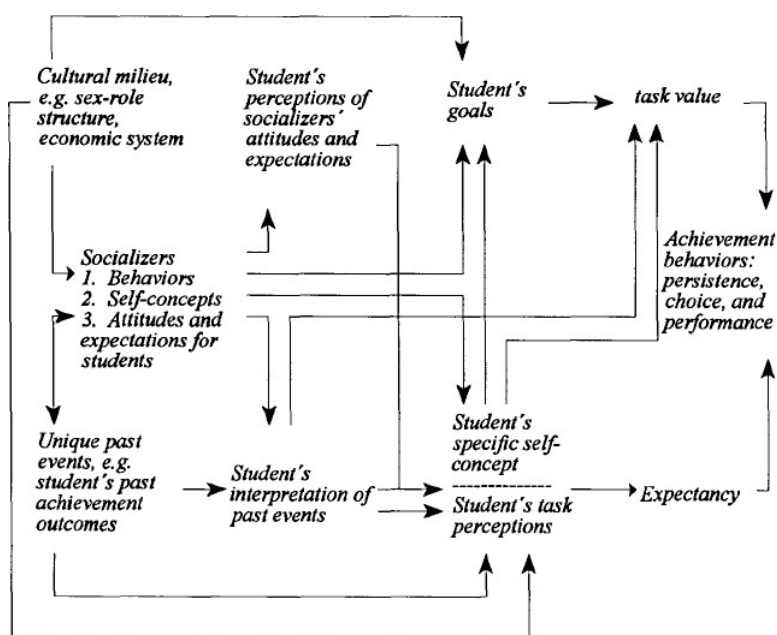


Fig.2: The expectancy x value theory. (Eccles, Adler, Futterman, Goff, Kaczala, Meece, & Midgley, 1983, p. 80)

Looking at the theory in more depth, the starting point seems to be the cultural milieu a person is in, which is at least one of the starting influences in the previous theory as well. These cultural factors influence the effect others have on a person, by defining the context in which a person lives. This may reflect, for example, living in a collectivistic or an individualistic society, which already has an impact on the behavior

(Butler et al., 2007) as they value different aspects and therefore other persons will also have different expectations regarding the same context. This can be their expectations communicated or general attitudes they display. There is a reciprocal association between these parameters and the experience the person had in the past, which can be defined as that person's learning experience. Next in the theory, is the person's interpretation of past events, as well as the interpretation of the attitudes and expectations of important socializers. Combining those antecedent factors, we have figured out the influences on the two important components of actual behavior, which are the ascribed value to the task by the person and the expectation to achieve the desired outcome. At this point the theory can be translated into mathematical terms pretty well and can be understood as a multiplication term. The value of a task multiplied by the expectation to succeed in performing the desired behavior results in the probability to show the behavior. Looking at this in mathematical terms, the importance of the role expectation plays becomes clear, because if a person does not expect to succeed at all, the expectation score will be zero and any multiplication terms with this number results in zero, meaning the behavior will not be shown at all. Following this logic, the expectation to succeed is one of the crucial factors in deciding whether or not to take certain actions.

2.2.3 ViolEx-Model

The last model, called the ViolEx model, is different in the sense that it does not primarily focus on the formation of expectations and stop at the point where an action is taken, but continues and explains why the action (or its consequences) lead to the stabilization or to changes of expectations.

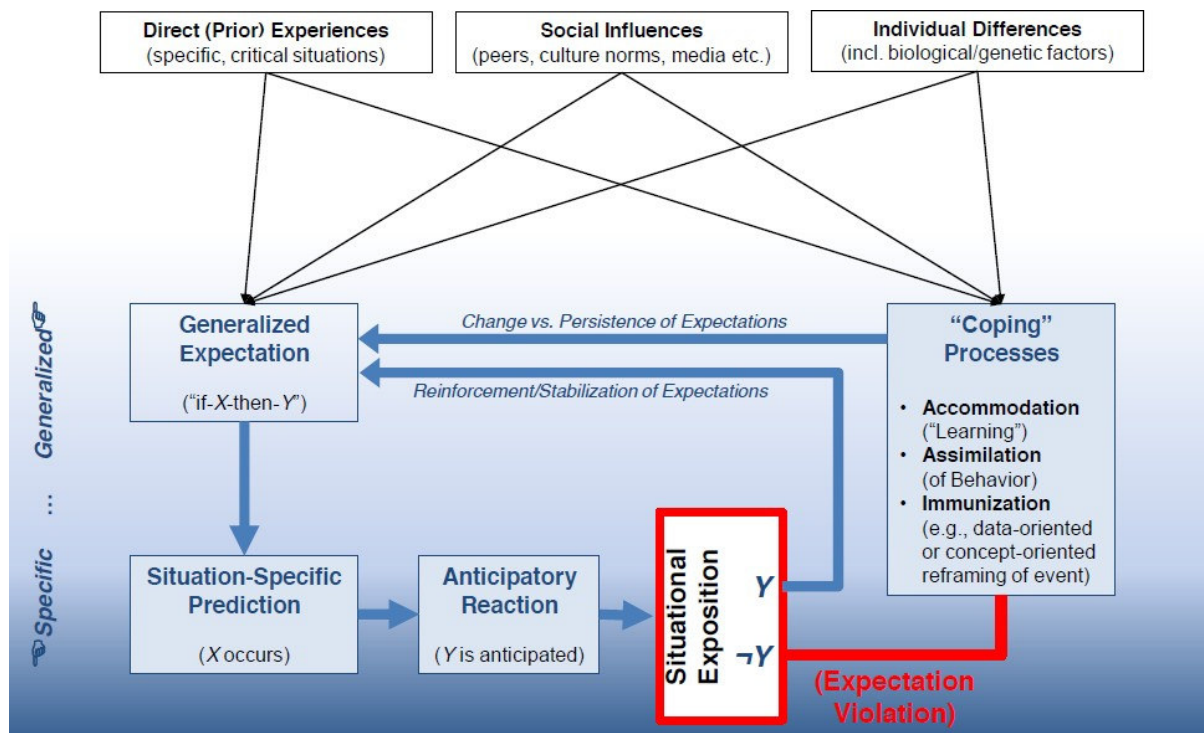


Fig.3: The ViolExModel (Rief & Glombiewski, 2016, p. 4)

This model includes three main aspects influencing the general expectations of a person. These three factors are: direct (prior) experiences, which can be anything a person has lived through or witnessed, such as grades received in a particular subject or how a specific behavior led to a result. A simple mechanism, well-known to most people regarding the effect of past experience on the formation of expectations, is conditioning. Simply put, people expect something when it has been like this in the past. One of the early pioneers in this area was Pawlow (1903) who discussed conditioning, which reflects how a repeated experience leads to a certain anticipatory reaction, expecting the same event to happen again. This is important to bear in mind in study 2 and 3, where the mechanism of building expectations according to past experience is a central assumption.

Another factor described in the model are social influences. These are more diverse, and social learning in this context refers to the assumption that people form expectations from seeing others behaving in a certain way, or it can be peers who have an opinion about a specific topic and in this way influence how someone thinks about it and what he or she expects if confronted with this topic. Besides peers, another aspect of social influences are cultural norms. Cultural biases and stereotypes are examples of how expectations form about a group without having to know this culture

in detail (Hitti & Killen, 2015). The opposite applies to cultural norms where people know their own culture very well and see how others act in certain ways, thus assuming that they are supposed to behave in the same way. This is the basis for study 1, using this principle to compare expectations of people belonging to different cultures. Depending on where somebody lives, different aspects of life are prioritized differently, like the value of children (Nauck & Klaus, 2007). These priorities influence in which fields a person will have high expectations and which domains are not as important. This category, cultural norms, also refers to things that are typical for a cultural group. Not only is this what they prioritize, but also what are typical, expected responses to things such as bad behavior. Family is another social influence that plays a major role in the formation of expectations, because family members are usually the people with whom the most time is spent up to a certain age and who shape the thinking and behavior of oneself (Morris, Silk, Steinberg, Myers, & Robinson, 2007). Also, as family is often present, people learn typical patterns of response to a lot of different things, thus expecting them to be normal.

Of course, there is another important influence on the formation of expectations besides social influences and prior experience, which lays within the person themselves. Personality refers to individual differences in characteristic patterns of thinking, feeling and behaving (Kazdin, 2000). All of the above combined, lead to the formation of generalized expectations.

An advantage of the ViolEx model, when compared with other models, is that it does not only give a brief overview of how generalized expectations are formed, but also how these expectations are applied to situations and how the situation has repercussions on the expectation. According to the model, a general expectation can become specific, if confronted with a specific situation. Concrete examples for this can be found in section 4, where the results of the studies are discussed and integrated using the ViolEx model. After a situation has occurred, one has to check whether it fit the expectation or not. If it was as expected, nothing will happen and the expectation is going to become more assured. If it was different than expected, different mechanisms could occur. One of them, likely applying mostly to minor deviations from the expectation, is data-based immunization, which ignores the contradiction to the prediction and thus does not change the expectation. The other two specified mechanisms are accommodation and assimilation. Assimilation will also contribute to persistence of the expectation, as actions are undertaken to avoid expectation

disconfirming information, while accommodation will cause a change. These processes are of special relevance for the third study conducted in this doctoral thesis.

Besides these more psychological reactions to an expectation and its fulfilment or violation, there are also processes happening physiologically. On a biological basis, returning to Pawlow (1903), he saw the typical production of saliva in dogs expecting food, which is an autonomous reaction. Today, science has advanced and we know an expected reward starts certain processes using dopamine, which is an important factor in building motivation (Biesdorf et al., 2015; Collins et al., 2016; Hart, Rutledge, Glimcher, & Phillips, 2014). Another well-known example of effects of expectations on the body is the so-called placebo effect, where the body reacts to something that wasn't actually given, simply because it was expected (Enck, Bingel, Schedlowski, & Rief, 2013).

Apart from the intra-body consequences of expectation, there are also those reactions that are shown in some kind of behavior. An example here is that people were found to adjust their behavior in accordance with the expected intention of other people (Slepian & Ames, 2016). A simple example from everyday life is the decision to buy something in the supermarket that's on offer because it is expected that the prices will go up again (Kakeu & Byron, 2016). These are some general examples of how expectations have an influence on all aspects of life. The effect of expectations becomes even clearer when looking more closely at parental expectations and their influence on the behavior of the parents, as well as the behavior and attitudes of their children, which occurs in section 2.2.5.

2.2.4 Integration of the Three Models

The first two models describe how expectations are formed, which then influence behavior, while the last model focuses on the maintenance or change of expectations. Every model includes previous circumstances that influence the formation of expectations. Two factors appearing in all of these models are the cultural background and the personal experiences one has throughout his or her life. The cultural background also interacts with other relevant social individuals shaping perception of events. The first two models are further detailed than the ViolEx model, as this only briefly states that generalized expectations turn into situation-specific expectations, but does not make an assumption on how this happens. The theory of planned behavior,

as well as the expectancy-value model point out that the attitude towards the behavior, which might equal the value a behavior is ascribed, are one of the important factors influencing whether an action is taken or not. Both models equal each other in the sense that perceived behavioral control and the expectancy (to be able to show a behavior) complete the other path towards an action. In both models, social norms also have an impact either directly on the intention to show a behavior or on the value of the behavior. At this point both models stop, as here the action is either taken or not. The ViolEx model builds upon this and includes the result of the action, i.e. whether the reaction led to the intended result or not. It goes on stating that the expectation is reinforced in the case that everything went as expected, but also offers different strategies of how a person could behave, if the event did not go as expected. Still, these actions can lead to the reinforcement of the expectation in the case of immunization or assimilation. The other possibility, i.e. accommodation, will lead to a change of the expectation. The models overlap in many ways, with each having a unique addition the other models do not have.

2.3 Parental Expectations

By far the best researched area regarding parental expectations up until now is academic achievement. The aforementioned processes of expectation forming apply to this area. Over 50 years ago Sewell and Shah (1968) showed that parental expectations are formed, to a large extent, by the previous results of their children. Noel, Stark, Redford, and Zuckerberg (2013) also confirmed social comparisons as a basis for expectations regarding one's own child. In the same study they found parents have higher expectations than the achievement of the child would allow. This, in turn, has been found to be useful to some extent, as it results in parents who foster their children, which in turn leads to better achievement (Fan & Chen, 2001). But also the opposite is known, where too high of expectations lead to pressure and overcontrol by the parents, which then leads to worse grades and distress in the child (Pomerantz, Moorman, & Litwack, 2007; Tan & Goldberg, 2009). Some mechanisms have been discovered, explaining how parental expectations influence the child – one of which is the child internalizing the parental expectations (Cheng & Starks, 2002), which either leads to more confidence or higher pressure.

However, the influence of parental expectations on academic achievement is not the only area that has been researched. There are also studies showing the influence of parental expectations on the social relations of children. For example, Gurland, Grolnick, and Friendly (2012) found that children acted differently towards other people according to what their parents told them to expect in advance of meeting these persons. This association was even stronger, when the other person behaved the way the child expected them to behave (Gurland & Grolnick, 2008). Besides this, the abstinence from alcohol parents expected from their child showed an association to the actual consumption by child (Nash, McQueen, & Bray, 2005; Simons-Morton, 2004a). The same principle works for other adolescence-related behaviors like starting to smoke (Simons-Morton, 2004b) or the use of violence (Ohene, 2006). If parents inform their child of what they expect from them with regard to violence, children are more likely to behave in the expected way. For the opposite behavior, i.e. pro-social behavior, it is the same: If parents communicate higher expectations to their child, he or she will show this behavior more often (Padilla-Walker & Carlo, 2007). Those parental expectations show associations with the behavior of the child already in pre-school (Ren & Pope Edwards, 2014), which makes it particularly important to be informed about those mechanisms. As pointed out, parental expectations on the one hand can have beneficial effects for children (if realistically high), while on the other they can even mean harm to the child (if they are too high or too low).

2.4 Developmental Tasks

As described in the previous section, parents have expectations of almost every aspect of their children's life, and thus also influence many aspects of a child's development. Now the question arises, what to focus on when researching expectations about a specific period in life, namely adolescence, when the child is undergoing changes, including physiological and psychosocial ones. A good starting point here, are the so-called developmental tasks (Havighurst, 1948). Havighurst defined different periods of life, like childhood, adolescence or adulthood, and typical developmental tasks related to this age range. The tasks range from physical maturation (like accepting the body), social expectations (like gaining access to a peer group) and personal values (like preparations to be able to access a fitting occupation). For adolescence he defined 8 tasks. It would be too much to ask parents about all of

them and they are, at least in part, hard to figure out using a questionnaire, so we had to reduce them. To do so, we focused – similarly to other researchers – on four typical challenges, namely establishing peer relations, displaying responsible social behavior, emotion regulation, and academic achievement (Farley & Kim-Spoon, 2014). It is important to attain these at least to a certain extent, otherwise it will lead to dissatisfaction with oneself and disapproval from others (Havighurst, 1948). In addition, these developmental tasks are seen as preconditions for advancing into the next life stage and thus crucial for the development of a healthy person. This also makes it of particular interest for parents who want a good future for their children (Reay, 2005), making it likely that parents have high expectations in these domains. The failure to complete those tasks results in social and personal problems, which leads us to the topic of mental disorders.

2.5 Mental Disorders

As previously mentioned, the unsuccessful completion of developmental tasks can lead to mental problems (Havighurst, 1948). In the worst case, these problems result in a disorder, like depression, as one feels bad or guilty for not being like others or not good enough to achieve the developmental goals (O’Connell, Boat, & Warner, 2009).

Mental disorders have become a serious problem around the world. According to the systematic review of meta-analyses from Steel et al. (2014), almost every third person (29%) has suffered from a mental disorder once in their life. The topic becomes more relevant when we look at the figure for the prevalence of having a mental disorder in the past year, which is still about every fifth person (18%). During adolescence, this figure is slightly higher, with at least one in five children currently having a mental disorder (ACOG Committee, 2017). The numbers are even more drastic in the child welfare system, where 49% are diagnosed with a mental disorder (Bronsard et al., 2016).

A mental disorder is classified as “a deviation from the norm in thinking or behavior following a certain pattern” (American Psychological Association (APA), 2013). Further distinction of mental disorders is possible, with the APA classifying disorder-related behavior that affects other people as “externalizing disorders”, while disorder-related behavior or thinking that affects the person him- or herself as “internalizing disorders”. Examples for these categories would be attention deficit hyperactivity disorder (ADHD)

or conduct disorder as externalizing disorders and anxiety disorders as internalizing disorders.

Looking more closely at the definition of mental disorders, it is obvious that problems with developmental tasks and mental disorders can have a bidirectional effect and have a huge impact on one's life. Going back to the models of expectation formation and their precursors, previous behavior is one of the predictors for expectations (e.g. Rief et al., 2015). This is also true for parental expectations and the behavior of the child. Continuing this line of thought, every behavior a child shows should have an influence on the expectations of parents and thus it is quite plausible to assume parents of children with a mental disorder will have lower expectations than parents of healthy children. This leads directly to one of the research objectives which will be discussed in study 3.

2.6 Intercultural Differences between Germany and China

When looking back at all the models described as the basis for expectation research (Eccles, 1983; Fishbein & Ajzen, 1975; Rief et al., 2015), it becomes obvious that culture and cultural influences have a huge impact on expectations. Due to this, it is necessary to take a closer look at cultural differences, in this case at the example of China and Germany, as those two countries are to be compared in study 1. One of the reasons for this is that China has the largest population of any non-western country, while Germany has the largest population in Europe (Urmersbach, 2020). Another reason is there are some cultural differences relevant of parental expectations. One of these important cultural differences is the classification into collectivistic and individualistic (Hofstede & Hofstede, 1997; Hofstede, Hofstede, & Minkov, 2010). Collectivistic in this sense means caring about the community and the wealth and prosperity of the whole society is the focus of every individual, while individualistic refers to focusing on oneself. Again, it is obvious parents may have different expectations regarding their child's social behavior if the child is supposed to care mainly for him- or herself or if he/she is supposed to think of the whole society. This might be a particularly important aspect, as those societal values seem to be very present (Schwartz, 1990). It is important to know the concept of the value of children (Nauck & Klaus, 2007), which states that children have to fulfil different tasks in different countries and cultures and therefore are of diverse value. An example for this

is, many parents in China have to rely on their children when they get old (Li, Xue, Wang, & Wang, 2017), as the social welfare system is barely developed (Trommsdorff & Nauck, 2005). This makes it more likely that Chinese parents have different expectations regarding their children than German parents do, because the German social welfare system is further developed.

A further identifiable difference is the concept of “Face”. Chinese “Face” can be described as a form of dignity, where it what others think of oneself is incredibly important, which is a big difference to western countries where it does not exist in a comparable form (Chang, 2008). Thus, the value the opinions of others have, is relatively high and again a predictor for higher parental expectations in China.

In western countries, there is often the cliché that Asian parents are exceedingly strict with their children, who therefore learn a lot of discipline. A famous Chinese author wrote a book about this, calling Chinese mothers “tiger moms” (Chua, 2011), and valuing the effort they put in their parenting, but also pointing out their dominance over their children. While there are some authors supporting her thesis (e.g. Chang, 2008), nowadays there are others talking about newer Chinese values being more socioemotional (e.g., Way et al., 2013). This makes it very interesting to look closer at the expectations Chinese parents have and which values they more closely resemble.

When we take a look at all the differences, the comparison between Germany and China can offer a lot of potential for research on parental expectations, despite the fact that there are also similarities between both countries, as for example developmental tasks (Havighurst, 1948) are seen as universal.

2.7 Interaction of the Actual and Expected State

All of the discussed models consider prior experience as an important influence on expectations (see Chapter 2.2.4). These prior experiences do not have to be far in the past, but can also be newly gathered. For example, the ViolEx-Model assumes new information has the potential to change future expectations (Rief et al., 2015). Academic achievement has emerged as a good area to test the interrelation of the actual state and expectations for the future. An advantage here is one gets feedback on a regular basis, so there has been time to form experience, but there are also consistent amounts of new information to either reinforce or disconfirm the expectation. It has been known for a long time that parental academic expectations are formed, to

a large extent, by the previous academic results of their children (Sewell & Shah, 1968). Since this foundational work, there have been a number of longitudinal studies researching the effect of grades on parental expectation (Aunola, Nurmi, Lerkkanen, & Rasku-Puttonen, 2003; Englund, Luckner, Whaley, & Egeland, 2004; Rimkute, Torppa, Eklund, Nurmi, & Lyytinen, 2014). Recently, there have also been studies interested in the effect in the opposite direction, that is how parental expectations influence the academic achievement of the child (Benner, Boyle, & Sadler, 2016; Dyk & Wilson, 1999; Gregory & Huang, 2013). Effects in both directions have been found, so it appears there is an effect of parental expectations on the achievement of the child, as well as an effect of the academic achievement of the child on the parental expectations. Speaking more generally, this can be seen as an indicator that the present state has an influence on expectations regarding the future, as well as expectations having an influence on the future state.

3 RESEARCH OBJECTIVES

Research on parental expectation is limited for the most part and the field of intercultural similarities and differences received little attention. There have been numerous studies comparing actual behavior of adolescents or parents across countries, including western, eastern and African countries (e.g. Hofstede & Hofstede, 1997; Nauck & Klaus, 2007), but studies comparing the representation of these (dis)similarities in parental expectations are rare. We aimed to add some knowledge to this field by comparing a German and a Chinese sample of parents regarding their expectations for the four selected developmental tasks and challenges listed before.

Despite the lack of studies for intercultural comparisons of parental expectations, there are many studies examining the relation of parental expectations and academic achievement of children. Not only single studies, but also a few meta-analyses (Fan & Chen, 2001; Jeynes, 2007; Yamamoto & Holloway, 2010). These meta-analyses, however only analyzed bidirectional associations, remained unclear whether expectations influenced achievement or the other way around. This inspired one study to include a broad variety of work in order to get robust effects on the influence of parental expectations on future academic achievement and vice versa, i.e. the influence of previous academic achievement on parental expectations. Doing this, we were also interested in finding out more about possible mediators and moderators, as

some have been previously suggested but not all of them were researched in the past meta-analyses. Importantly, none of the previous meta-analyses calculated cross-lagged effects, which are necessary to learn about the direction of the association.

Again, only some literature can be found regarding the association of a child's mental disorder with parental expectations (e.g. Almroth et al., 2019; Eisen et al., 2004). There has been research regarding the association of having a child with a mental disorder and parental expectation, mostly regarding academic achievement, but also regarding other outcomes like social relationships. What had not yet been done, was to research the association between these variables and parental dispositions, namely flexibility and tenacity. This connection is addressed in study 3, as well as including the perceived child behavior as a mediator explaining why parents have lower expectations in clinical samples.

Study 1: Do parental expectations differ between a western country (Germany) and an eastern country (China) and if so, in which areas are these differences particularly present?

Study 2: Are there bidirectional effects of parental expectations and academic achievement of the child? What are the moderators and mediators of these effects? Which direction of the effect is stronger?

Study 3: Do parents of children with a mental disorder have lower expectations than parents of healthy children? Is this difference mediated by the perceived present child behavior? Is there an association of the expectation with the tenacity and flexibility level of the parents?

4 EMPIRICAL STUDIES

The following section summarizes the three studies included in this thesis.

4.1 Study 1 - Comparison of Parental Expectations Between Chinese and German Parents

Theory: Parental expectations are influenced by many factors (Davis-Kean, 2005; Rief et al., 2015; Yamamoto & Holloway, 2010). In addition to prior experience and biological factors, like genes, there is the huge role of social influences on expectations. One of these social factors are cultural norms (Rief et al., 2015). Knowing that culture differs a lot between western and eastern countries (Hofstede, 1989), we decided to use a sample of German and Chinese parents to compare the level of expectations regarding different aspects of the child's life.

Method: To assess parental expectations, we used a pre-tested questionnaire (Ebeling, 2016). The items were adapted from measures that assess the present state of the child, namely from the Strength and Difficulties Questionnaire (SDQ; Goodman, 1997), the revised Children Behavior Checklist (CBCL 6-18R; Achenbach, 2001), and the revised Self-Perception Profile for Adolescents (SPPA-R; Harter, 2012). The final version consisted of five scales: emotion regulation, anti-social behavior, pro-social behavior, academic achievement, and peer relations. This questionnaire only existed in German and English, so great care was taken to translate it into Chinese and re-translate it by other native speakers. After this, it was handed out at schools and returned by a total of 421 parents. We checked for measurement invariance and were able to achieve configural, metric and partial scalar invariance for four of the five scales. Nonetheless, we had to exclude expectations regarding anti-social behavior as this scale did not show measurement invariance.

Results: First of all, we found medium to high expectations in both cultures in each of the remaining four scales. Expectations regarding peer relations were highest in both samples and showed the smallest between-group difference. Expectations regarding school grades conversely, showed the largest between-group difference. Significant differences were found with regard to expectations about emotion regulation (small effect) and academic achievement (large effect), which were both higher in the Chinese sample.

Discussion: The observed cultural differences in parental achievement-related expectations are in line with the stereotype that Asian cultures are very achievement-oriented. The observed group differences in expectations about emotion regulation are consistent with the stereotype that Asian people show high control of their emotion. This is especially interesting, as the other assessed domains, namely expectations regarding peer relations and pro-social behavior, did not differ significantly between German and Chinese parents. Altogether the results of this study show parental expectations partly seem to differ according to the culture, although half of the assessed expectations are on an equal level in both groups. This makes sense as there are some general aspects about growing up that apply for all cultures, so the found differences were only gradual and not absolute.

4.2 Study 2 - Parental Educational Expectations and Academic Achievement in Children and Adolescents – A Meta-Analysis

Theory: Education is an important aspect of life as it determines, to some extent, the possibilities a child will have when he or she grows up. Considering the high value, it is not surprising that parents do a lot to foster good grades and also have high achievement-related expectations regarding their child. There has been a lot research indicating parental expectations influence the academic achievement of the child.

Method: Literature was scanned via PsycINFO, ERIC, Google Scholar, and PSYINDEX. This produced 133 studies which we included in a random-effects meta-analysis. We also tested for possible mediators.

Results: We found that parental expectations tended to be higher than the actual achievement of the children. Looking at the cross-lagged effects, we found significant effects of child achievement on parental expectations and vice versa. Associations between parental expectations and achievement were partially mediated by educational expectations of the adolescents, child academic engagement, and academic self-concept, and to a lesser extent by parental achievement-supportive behaviors.

Discussion: As parental expectations predict change in child achievement, we conclude that parents should communicate slightly higher expectations than what the child is actually achieving. An interesting finding in this meta-analysis is parents are more effective in changing child achievement via transporting their expectations to the child, than by directly attempting to change the child's actual achievement with behaviors like checking the child's homework.

4.3 Study 3 - Parental Expectations in Families of Children With and Without Mental Disorders

Theory: As described before, parental expectations depend on different factors, and one of these is prior experience. If parents go to a child mental health service, there must have been something unusual they noticed about their child. This abnormal behavior might play a role in the adaptation of expectations and we expected those parents to have lower expectations than their healthy counterparts, as the disorder would probably go along with limitations in some parts of the life of their child. Another aspect which might influence the adaptation of expectations is the dispositional tenacity or flexibility of parents. Parents scoring high on tenacity likely want to achieve their expectations by all means possible, while parents scoring higher on flexibility might be better able to adjust to the circumstance that their child is showing different behavior from the norm.

Method: We used the same questionnaire as in study 1 to assess parental expectations. This questionnaire was accompanied by the Ten-Flex-K-Scale (Huckert, 2011) measuring tenacity and flexibility, as well as the Child Behavior Checklist (CBCL, Achenbach, 2001). The questionnaires were handed to a sample of parents at mental health centers, schools and sport clubs. Afterwards we checked the returned questionnaires and excluded those over the cut-off of the CBCL from the control sample and those who didn't get a diagnosis from the clinical sample. We were left with 50 parents of children with a mental disorder and 216 parents of children without a mental disorder. Again, we checked for measurement invariance, which was given.

Results: Parents of children with a mental disorder have lower expectations in every assessed domain than parents of healthy children. Testing for a mediating effect of the assessed present child behavior by the parents, we found that only present social problems had a marginally significant mediation effect on the association of group membership with parental expectations about peer-relations. Additionally, parents of children with an external disorder had significantly lower expectations regarding pro-social behavior and peer relations than parents of children with an internal disorder. Tenacity and flexibility both showed the same statistical effect in a way that scoring higher on one of those scales was associated with higher expectations.

Discussion: Looking at the results, we confirm that parents of children with mental disorders indeed do have lower expectations than parents of healthy children. As it was only a cross-sectional study, we cannot say anything about causality, although looking at the assumption that expectations form partially out of experience, we can speculate that parents adapted their expectations. Still, the question remains open regarding what parents adapt their expectations to, if it is not (only) to the present or past behavior of the child.

5 DISCUSSION

In this dissertation, we were able to broaden the knowledge concerning parental expectations, about influences on the formation and adaptation of expectations, and the effects of parental expectations on the behavior of the child.

Study 1 showed how parental expectations are, in part, cultural-dependent, as parents from Germany and China differed in their expectations towards children regarding academic achievement and emotion regulation, while the expectations about the other researched areas were roughly the same. This added to the idea that cultural values are represented by expectations and contributed to the comparison of different countries and cultures.

Study 2 added even more knowledge about the antecedents of parental expectations, but also gave insight into the consequences expectations can have. In this study we found the achievement of the child influences the expectations parents have, but these influence the future achievement of the child to an even larger extent. This study showed how important it is for parents to have realistically high expectations as it supports the child in his or her academic achievement as well as in personal development in general.

Study 3 was again a cross-sectional study, but it still showed the association between parental expectations and the mental health of the child. Although the mediation analysis was only partly supported by the data, there were still clear differences between the clinical and the healthy group. We also found dispositional flexibility of goal adjustment does not seem to be a good predictor for reducing parental expectations. Still, we were able to find that dispositional tenacity and flexibility had some kind of association with parental expectations. All in all, this study showed the interaction of expectations and behavior, although we were not yet able to clarify the mechanisms underlying this process.

None of the studies aimed at testing one of the models described in chapter 2.2 in total, but when trying to integrate all these findings into one model it might be the best to use the ViolEx-model (Rief et al., 2015) described in chapter 2.2.3. This model seems to fit best as the other two aim at predicting behavior, which was not the purpose of the studies conducted. The first study focused on the adaptation of expectation to the cultural milieu, where the focus was on how culture influences expectations, rather than how expectations influence culture-specific behavior. The second study focused

on the interaction of the present state and expectations in both ways, which was not explicit in the theory of planned behavior (Ajzen, 1985) and the expectancy-value-model (Eccles, 1983) except from the component of previous experience and the fact that higher expectations lead to a higher chance to show a behavior to make the expectations come true in both models. In this way the second study bridged the gap between the relation of expectation and the present state, which are reciprocal. It also tested for assimilative processes, as far as the mediators can be seen as parental effort to make their expectations come true. Especially for the third study, the ViolEx model is of importance, as the third study researched factors that might lead to a change in expectations and why parents make their expectations stronger or weaker. It can be argued that this goes as previous experience and thus is a component of all models, but as we look more closely at the ViolEx-model it also gives information about the why. The usual processes keeping expectations high in case of disconfirming information are assimilation or immunization, which seem to work less effectively or not at all in parents of children with a mental disorder, as the between group differences were significant in all areas. We hoped to be able to explain why the expectations are different by taking into consideration dispositional tenacity and flexibility. We could show that tenacity and flexibility both predicted parental expectations. In their work, Brandtstädter and Renner (1990) thought dispositional flexibility goes along with situational accommodation of one's goals and dispositional tenacity with situational assimilation (bringing the reality in line with one's goals or self-concept). Those two processes are of relevance, as they are considered reactions to expectation violation in the ViolEx model (Rief et al., 2015). Still, it might be that the more flexible parents of children with mental disorders had lower expectations, as parents who are flexible might think their child is flexible as well and might soon improve his or her behavior. When interpreting the positive association of dispositional flexibility with parental expectations, we also have to be aware that the scale by Brandtstädter and Renner (1990) was originally constructed to assess one's dispositional flexibility in *goal* adjustment rather than one's dispositional flexibility of expectations, and may have been too unspecific for predicting reductions of parental expectations.

5.1 Limitations

A general problem when doing research on parents is the underrepresentation of fathers. This problem was encountered in all the studies conducted of this doctoral thesis. It does not automatically mean the data is not representative of parents, but it has to be interpreted with caution, when considering parents in general as being composed of mothers and fathers. More specifically, fathers might have different expectations than mothers, for example when thinking of classical gender stereotypes related to academic aspirations, especially in the math grade. However, results of available studies on this topic are inconsistent. Some authors (e.g. Aunola, Nurmi, Lerkkanen, & Rasku-Puttonen, 2003) found that fathers, but not mothers, had significantly higher expectations for their son's math grade than for their daughter's, while others (e.g. Gil-Flores, Padilla-Carmona, & Suárez-Ortega, 2011) demonstrated that this effect is the same for both, mothers and fathers. Because of the underrepresentation of fathers in our studies, we were not able to statistically test for differences between mothers and fathers, but the underrepresentation of fathers had no effect on the observed group differences, as the percentage of fathers and mothers was about the same in all groups assessed in study 1 and 3. Other general problems refer to the use of questionnaires. It has been known for a long time now that questionnaires bear the problem of "saying-yes" or "saying-no" tendencies for extreme answers, or for the middle or so-called "faking bad" or "faking good" (Furnham, 1986), which might be of special relevance for the clinical sample.

There are also other limitations that have to be considered when thinking about study 1. Although great care was taken to achieve a maximum of comparability between the two samples, we were only able to get partial scalar invariance of our measures, which was especially true for academic achievement, as the number of items was too low here and thus, we could only compare single items. Also, as pointed out in the article, all Chinese parents were recruited from larger cities, as well as from medium to large cities in Germany. Already the comparison here is a little complicated, because a large city in Germany is still much smaller than a large city in China. Besides this, rural areas, in Germany as well as in China, were completely left out in this analysis, so the results have to be analyzed with caution when talking about generalizability. Social desirability is another topic to consider when interpreting the results of study 1. As most of the questions we asked could be answered in a way that makes a "good impression" on the person reading the study, this might be a serious

point. When we look closer at the habits especially regarding China and their concept of “face”, we know people tend to present themselves in a good way. Unfortunately, we did not run a scale measuring social desirability, which can be counted as a limitation to the study. So, combining all those limitations leads to another problem that could have already become clear looking at chapter 2.6, where the cultural differences between Germany and China are described. This refers to the fact that there are many differences between those two countries, which can all have an influence on parental expectations. We were able to show some cultural differences, but are not able to tell which of the many cultural factors caused them.

Study 2 showed some limitations as well. First, it has to be considered that although we included way more studies than previous meta-analyses did, there may have been papers we did not find and include. We did, however, calculate a trim and fill analysis to estimate a possible publication bias. In addition, there were not enough studies to test the mediating effects of differential reinforcement of the child’s achievement-related behavior, and there was only a limited number of studies researching the mediating effect of the child’s academic self-concept of the association between parental expectations and academic outcome, which restricted statistical power. Continuing with the mediators analyzed, we had to complete every analysis for the mediators separately, because most studies did not research them together.

In study 3, some limitations need also be mentioned. Most important is the relatively small sample size for the clinical group. Only 50 parents of children with a mental disorder were available for comparisons between parents of healthy and ill children, which made it hard to differentiate further. Analyses of internal disorders versus external disorders had limited statistical power and tests for differences between expectations of parents of children with single disorders were impossible. This was the case for comparisons of ADHD and conduct disorder, but also for even more differentiated analyses like the different forms of anxiety disorders. Another problem that is always true of cross-sectional research, is the question of causality. It is plausible, that parents realize the behavior of the child and adapt their expectations to it, but we cannot prove this thesis with our study. We did not measure specific situations in which parents are confronted with expectation violation, so we cannot comment on the coping strategies they use. Also, the original intention of the scales of dispositional tenacity and flexibility were to assess one’s adaptation of goals in the process of aging, so applying it to parents in the context of expectation change is a

whole new idea and has no references yet. It is also of relevance, that social desirability might play a role in the results of this study as well. The problem of social desirability discussed in the scope of study 1 also applies here. An advantage of this study is the fact the sample consisted of parents living in Germany only, so cultural factors can be excluded. Still, when a child already has the label of being different than other children, it might be desirable for parents to at least present their child in a brighter light than they actually see them. Nonetheless, we found significant differences for all assessed scales, but those differences might have been even larger without this possible bias.

5.2 Future Research

The present thesis was able to fill some of the gaps in knowledge regarding parental expectations, their antecedents and their consequences. Still, many questions remain open, and new questions also arose that could be addressed in future studies.

The first study gave us an insight in the cultural differences between expectations of parents from a western and an eastern country. Two of the typical stereotypes comparing those countries were represented in the expectations parents had. This opens up the door for research on more stereotypes and their representation in parental expectations. We were also able to show that expectations did not differ between parents from the two countries in some domains, so it would be interesting to find out more regarding why some expectations differ while others do not. This would also work comparing different regions of China, especially as the people from rural areas might have different expectations compared to persons from larger cities because of the different (infra)structure and possibly more western influences due to the globalization, which could align their expectations to people from Europe or America. Also, people from Hong Kong or Macau might have different expectations, as those cities were exposed to a lot of western influences. Of course, this study was conducted only across two cultures so it would also be interesting to find out about more countries and the factors that influence expectations around the world. This would also be helpful to overcome the problem addressed in the limitation section, that multiple cultural differences work together and it is hard to differentiate which difference influences which outcome. Possible examples for different people around the world are indigenous people who ascribe a different value to their children than most parents from other cultures (Klaus & Nauck, 2007). If the child has to fulfil different tasks, it is plausible to assume parents also expect different behaviors to be of more importance.

Children from rural areas are more than twice as likely to be out of primary school than their urban peers. In conflict zones, 27 million children are out of school entirely (Unicef, 2020). It would be very interesting to see the pattern of expectations in these areas, where there are markedly different life circumstances. Another interesting continent to do research on would be Africa, as it is very diverse. Looking more closely at South Africa, we can find quite a modern, almost westernized society, focusing on the white middleclass, so the values and also the expectations might be on a comparable level as for western societies like they were for Germany in our sample. This might already change, focusing more on people of color (Beutel & Anderson, 2008). Another aspect, which might cause the expectations to be more like those in China, is the fact that both countries are considered developing nations (Conceição, 2019, (UN human development report)). Looking at Africa, we also find the least developed countries, like Niger, which might again paint a different picture. So, when focusing exclusively on the topic of intercultural comparisons, there is a lot more research to be done before we can fully understand the mechanisms of culture on parental expectations.

As we learned from study 2, there is a reciprocal effect of parental expectations and a child's outcome in the academic field. It would be important to research this effect for other domains, which is particularly important after finding out parental expectations had a larger effect on the outcome of the child, than actual parental achievement related behavior did. If future studies showed the same effect for other behaviors, this effect could have a huge impact on parenting and parent-child communication, as it could facilitate the development of the child by just communicating slightly higher, but still realistic expectations, than the actual behavior currently displayed by a child. As pointed out before, we were able to find some mediators, but we could not test for all assumed mediators, so it would be good to conduct more studies in the future considering, for example, differential reinforcement. Again, it would be interesting to find out more about the coping strategies parents use in concrete situations where they receive expectation-disconfirming information and how this, in turn, influences the expectations for the future.

The results of study 3 also raised some interesting questions for future research. We found a clear difference between the expectations of parents of healthy children and parents of children with a mental disorder. As mentioned earlier, we were unable to test specific hypothesis, like a possible difference between diverse kinds of externalizing disorders. Still, it would be of high relevance to be able to make more

precise assumptions about why and in which areas parents lower their expectations due to a disorder. This in turn could lead to even further studies on how parental expectations can be of relevance for treatment. Even more specialized models of social phobia versus school phobia for example and their effects on parental expectations would be interesting as well, to see how precisely parents differentiate between the researched domains or have more of a global view on their child. This could also be tested when comparing results of the studies on externalizing and internalizing disorders to get a clear picture of the effect different disorders have and how individual parents react to them. The best way to complete this would be a meta-analysis, but as there are only a few studies regarding this topic up to now, it would be best to start with large patient studies or, if possible, multi-center studies. This would contribute to another area, as in our sample, we were only able to test for between-group differences, but it would also be interesting to test for within-group differences, which requires large samples. Examples here could be to identify parents who change their expectations versus parents who do not, or parents who have realistically high expectations versus unrealistically high expectations. To test how well parents are at differentiating their expectations across domains, it might also be interesting to look more closely at families with more than one child and how their expectations differ between their children. Interesting results might also be obtained by comparing parents with and without a mental disorder regarding their expectations of the development of their children (e.g. Wille, Bettge, & Ravens-Sieberer, 2008). A different approach, but also of high relevance, is to look at the topic of expectations and behavior from a longitudinal perspective. This can give insight into different things: First, it can deliver information on the extent to which expectations change in a given period of time. Second, and probably more important, it would provide insight into how far and how fast parents change their expectation. Therefore, it would probably be best, if one can collect data before a disorder occurs, then collect data during therapy, and finally do another wave after treatment. Third, it can broaden the knowledge of how parental expectations can be influenced and of use in a therapeutic process.

Coming back to the research area of comparisons of expectations, it would also be of interest to look at one's own child versus children in general, and perhaps consider what parents wish for their children. Looking more closely at parental wishes, it might also add to our knowledge on what parents do in order to make their wishes

for the children come true. This, in turn, could also help to get a more detailed picture of how some expectations are formed and reinforced.

5.3 Conclusion

All in all, the research conducted for this doctoral thesis was able to show that some parental expectations are the same in different countries, while there are other domains of parental expectations in which parents from different countries significantly differ from each other. In this thesis, we were able to identify emotion regulation and academic achievement to be higher in China than in Germany. Besides the cultural differences and similarities, we could also show, that it is good to have expectations slightly above the actual achievement of the child, because these expectations can increase the child's outcome. This information is potentially helpful for all parents as it enables them to easily help their children with their developmental tasks, but might be of special interest for parents of children with a mental disorder, as we saw those parents have significantly lower expectations than parents of healthy controls. Knowing that realistically high expectations are helpful, because parents use more strategies to support their children, manage to boost the child's self-concept and the child's own expectations, parents can also support progress in therapy if this information is communicated to them and used in the right way.

6 BIBLIOGRAPHY

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7 APPENDIX

7.1 Manuscripts of the three studies

7.1.1 *Study 1 - Comparison of Parental Expectations Between Chinese and German Parents*

Comparison of Parental Expectations between Chinese and German Parents

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Abstract

Parents have expectations about almost every aspect of their children's life and development, which may influence their children's behavior directly and indirectly. Cultural differences between western and eastern countries, for example with regard to the value of children, are likely to lead to cultural differences in parental expectations about the development of their children. In the present study, these differences were assessed by comparing data from 252 Chinese parents of early adolescents with those of 169 German parents. Factor analysis led to four factors (expectations about emotion regulation, academic achievement, peer relation and social behavior), which (apart from academic achievement) showed measurement invariance across the two groups. Comparing the two groups, Chinese parents were found to have significantly higher expectations regarding their children's emotion regulation as well as their academic achievement in single subjects. Expectations about peer relations and social behavior did not differ between groups. We conclude that parents have high expectations in general and there are similarities as well as differences between the two cultures. Cultural differences in parental expectations might be an explanation for observed differences in children's achievement and emotion regulation.

Synopsis

Objective. Parents have expectations about almost every aspect of their children's life and development, which may influence their children's behavior directly and indirectly. Cultural differences between western and eastern countries, for example with regard to the value of children, are likely to lead to cultural differences in parental expectations about the development of their children. **Design.** In the present study, these differences were assessed by comparing data from 252 Chinese parents of early adolescents with those of 169 German parents gathered via questionnaires handed out at schools. **Results.** Factor analysis led to four factors (expectations about emotion regulation, academic achievement, peer relation and social behavior), which (apart from academic achievement) showed measurement invariance across the two groups. Comparing the two groups, Chinese parents were found to have significantly higher expectations regarding their children's emotion regulation as well as their academic achievement in single subjects. Expectations about peer relations and social behavior did not differ between groups. **Conclusion.** We conclude that parents have high expectations in general and there are similarities as well as differences between the two cultures. Cultural differences in parental expectations might be an explanation for observed differences in children's achievement and emotion regulation.

Keywords: expectations, parents, cross-cultural comparison

INTRODUCTION

Expectations are relatively stable anticipations about a certain circumstance (Carr, Gibson, & Robinson, 2001), such as the future behavior of other persons (Odhammar & Carlberg, 2015; Slepian & Ames, 2015). They are usually grounded on past experiences, and are often based on a long history of collecting information, which makes them more resistant to change (Rief et al., 2015; Swider & Babel, 2013).

A very famous example describing the influence of expectations on someone else's behavior is the so-called Pygmalion or Rosenthal effect (Rosenthal & Jacobson, 1965): In 1965, Rosenthal und Jacobson manipulated the expectations of teachers about random students, and about a year later they found out that these expectations came true. This effect has been replicated repeatedly since then (e.g., Friedrich, Flunger, Nagengast, Jonkmann, & Trautwein, 2015; Jussim & Harber, 2005).

When addressing parental expectations about their children of a certain age, it is necessary to consider important developmental tasks related to this. In the middle of the last century, Havighurst (1948) defined developmental tasks for different age periods. For adolescents, he considered eight aspects to be important. The present study addressed four aspects of development in early adolescence that have been considered important developmental tasks (Havighurst, 1948) or challenges (Farley & Kim-Spoon, 2014) – namely peer relations, responsible social behavior, emotion regulation, and academic achievement.

Parental expectations about the achievement of their children tend to show moderate to strong associations with the academic achievement of the offspring (e.g., Pinquart & Ebeling, in press; Tan, 2017). For exasmples, children spend more time on their homework if parents have higher expectations about their academic achievement (Li, Xue, Wang, & Wang, 2017).

With regard to peer relations, parental expectations have an important influence on the behavior of their children. What parents say about other people influences the behavior of their children towards these persons and, thus, has an impact on the selection of friends (Gurland, Grolnick, & Friendly, 2012). Additionally, early adolescents were found to like other people more if those people acted like their parents expected them to do (Gurland & Grolnick, 2008). Although peers become increasingly important in early and middle adolescence, parental expectations still have an important influence on their children (Wentzel, Russell, & Baker, 2016).

When focusing on socially responsible behavior, parents also play an important role: For example, a study found the higher the parental expectations about the prosocial behavior of an adolescent, the higher the prosocial behavior of the adolescent (Padilla-Walker & Carlo, 2007).

Problematic social behaviors include aggression and violence. If parents manage to communicate that aggression and violence are harmful and expect their child to avoid these behaviors, children show less aggressive behavior (Ohene, 2006). Obviously, this also includes the regulation of emotions, such as anger.

As most of these findings come from western countries, there is the need to look more detailed at their generalizability around the world. Different cultures consider different values and attributes to be important. When addressing parental expectations, an especially important aspect are the so-called values of children (Nauck & Klaus, 2007). The organization of a country (e.g., having a social insurance or pension system) affects attributes that are valued in children. In China, where the social insurance system is not very well developed, many parents need to rely on their children to care for them when they get old (Trommsdorff & Nauck, 2005). This causes parents to have high expectations of their children's academic success and socially

responsible behavior, as these are essential for having the financial and moral background to provide for them in the future. Thus, expectations of Chinese parents about academic achievement and responsible behavior of their children are likely higher than expectations of German parents, who can count on a complex social insurance system that serves everyone. This makes a comparison between parents from these two countries interesting, although German children have also strong filial obligations (Kohli, Künemund, Motel & Szydlik, 2000).

In addition, cultural values play an important part as well (Kopalle, Lehmann, & Farley, 2010; Laidlaw, Wang, Coelho, & Power, 2010). In his very well-known work, Hofstede defined different dimensions on which cultures are located (Hofstede & Hofstede, 1997; Hofstede, Hofstede, & Minkov, 2010). One of the most popular distinctions refers to individualistic and collectivistic countries. According to Hofstede's research, Germany scores, on this dimension, in the highest third (indicating high levels of individualism), while China scores in the lowest third (indicating high levels of collectivism). Collectivism as a cultural value emphasizes cohesiveness among individuals and prioritizes the group rather than the individual. Individuals or groups that ascribe to a collectivistic worldview tend to find common values and goals as particularly salient (Schwartz, 1990). This concurs with the fact that many Chinese parents rely on their children to take care of them when they get older while German parents can also rely on the welfare system. It has also been found out, that Chinese daughters are willing to accept more personal restriction to care for their parents than German daughters (Schwarz, Trommsdorff, Zheng, & Shi, 2009). This might also cause high parental expectations about their children's socially responsible behavior in China and medium parental expectations in Germany.

A few years ago, a Chinese professor at Yale Law School published a book in which she describes typical Chinese parenting behavior and the expectations she has for her children (Chua, 2011). She wrote that her children always had to be the best in school and competitions, whereas peer relations were less important. An official OECD survey (2009, 2011) supports Chua's view by providing evidence that German children, on average, have two more hours of leisure time per day than Chinese children. According to Chua's view, children's obedience, such as following rules and regulating one's emotions is another important behavioral factor. Chua's perspective is supported by other Chinese work outlining the traditional Chinese parental expectations of their children (Fong, 2007). Although these expectations seem to have become old-fashioned since the beginning of the 21st century (Woronov, 2007), these expectations still play a role, so that there is a mixture of traditional and new parental expectations in modern China (Lieber, Fung, & Leung, 2006). The newer Chinese values focus more on socioemotional characteristics of the child – such as having good communication skills, friends, being assertive and happy – which are more similar to western values (Way et al., 2013).

Since 1978, during the course of the new Chinese policy, education became one of the most important topics to tackle (Adick, 2013). This in turn makes it plausible to suggest that Chinese parents have very high aspirations for the academic and career success of their offspring, as the children are expected to support their aging parents financially in the future. This trend may be enhanced by the one-child policy, which was introduced at around the same time, because most aging parents could only rely on one child and his or her spouse. However, some studies found singletons to be less trustworthy and conscientious than their peers growing up with a sibling (Cameron, Erkal, Gangadharan, & Meng, 2013), which was explained by the so-called "little

emperor phenomenon” (Wang & Fong, 2009) – that parents of only children may be more likely to coddle their child than other parents. Nonetheless, Chinese singletons have also been found to show better academic and social adjustment than Chinese siblings (Zhao, Ma, Yao, Wan, & Ng, 2013), which could be affected by high parental expectations of the academic and social success of their children (Cameron et al., 2013). Most German parents also tend to have high expectations about the academic success of their child. For example, Wiedenhorn (2011) found that 67% of the assessed German parents expected their child to finish the highest school track that gives access to university.

Finally, another important concept to keep in mind when talking about China is the concept of “face”. A famous Chinese writer defined it as “abstract and intangible, it is yet the most delicate standard by which Chinese social intercourse is regulated” (Yutang, 1935; pp.199-200). Chinese “face” is other-directed, meaning that it is more important what others think about a person than the person him- or herself. This seems to be a big difference when comparing Chinese and western people in terms of social behavior (Chang, 2008). As the evaluation of one’s behavior by others has a high value, Chinese expectations about appropriate social behavior and emotion regulation are probably very high.

Altogether, there are theoretical assumptions regarding cultural differences between Chinese and German parents, but most of the listed factors suggest that these differences are rather gradual. For example, fertility rates differ only slightly nowadays (1.5 to 1.6) (Worldbank, 2017) and German children also have quite strong filial obligations (Kohli et al., 2000).

Up until now, hardly any studies have compared parental expectations about the development of their children in China and Germany. As an exception, Frenzel (2007)

reported that parental expectations about the achievement of their children showed stronger associations with student's feelings related to achievement in China than in Germany. This supports the idea that parental expectations play a larger role in China than in Germany (Salili, 1994). There are, to our knowledge, no further cross-cultural investigations of similarities and differences between expectations of German and Chinese parents. This led to the following questions we wish to examine in this paper.

Hypotheses

- 1) As China's one-child policy increased the importance of the educational and occupational success of the child in order to provide economic support for their aging parents, we expected to find higher expectations regarding academic achievement in Chinese parents than in the German parents.
- 2) Due to the concept of face and its implications discussed before, we expected Chinese parents to have higher expectations regarding their child's emotional regulation skills in comparison with German parents.
- 3) Based on the importance of the concept of face and of collectivistic values in China, we also expected Chinese parents to have higher expectations than German parents regarding their children's pro-social behavior and avoidance of anti-social behavior.
- 4) As German students were found to have more spare time than their Chinese peers, they have more opportunities to spend time with their friends and peer groups. Thus, we expected to find higher expectations in German than in Chinese parents with respect to their children's success in building peer relations.

METHODS

Participants

A total of 421 parents participated in the study. Great care was taken to maximize the comparability of the German and the Chinese samples. The German sample consisted of 169 parents (141 mothers and 28 fathers) of adolescents from four different schools in different parts of Germany including the four major German school-types (Haupt-, Real-, Gesamtschule, and Gymnasium). Children were either in 5th grade ($N = 90$) or 6th grade ($N = 77$), and their age varied from 9 to 14 years ($M = 11.3$; $SD = .78$). In total, 97 German children were female and 71 male. Participation was voluntary, and parents got the questionnaire from their children, who received them at school and were asked to return them there.

The Chinese sample consisted of 252 parents (198 mothers and 52 fathers) from four different schools in China, two in Tianjin and two in Xi'an. Children were either in 5th grade ($N = 107$) or in 6th grade ($N = 145$). Their age varied from 10 to 13 years ($M = 11.4$; $SD = .54$). Altogether, 123 children were female and 128 male. The data collection procedure was the same as in Germany. The two samples did not differ significantly regarding age ($t = 1.29$; $df = 417$; $p = .20$) or gender ($t = 1.76$; $df = 417$; $p = .08$).

Measures

Available measures of parental expectations about academic achievement assess anticipations of marks and/or long-term academic attainment such as completing college or university (e.g., Gill & Reynolds, 2000). Given the national differences in the available forms of long-term academic attainment, we decided to assess parental academic expectations only with regard to future marks in core subjects.

Because validated measures for assessing parental expectations about emotion regulation, avoiding antisocial behavior, and building peer relations were not available, we adapted items from questionnaires that originally assessed the present state of these behaviors. The four questionnaires used as a basis for selecting and adapting items were the Strength and Difficulties Questionnaire (SDQ; Goodman, 1997), the revised Children Behavior Checklist (CBCL 6-18R; Achenbach, 2001) and the revised Self-Perception Profile for Adolescents (SPPA-R; Harter, 2012). All items were rated using a 5-point Likert-type scale ranging from 1 = *doesn't apply at all* to 5 = *totally applies*.

In a preliminary study with a different sample of 202 German parents, the analysis resulted in five factors which addressed expectations regarding emotion regulation (7 items), academic achievement (4 items), avoidance of anti-social behavior (5 items), pro-social behavior (6 items), and peer relations (6 items). Sample items are as follows: "I expect my child to calm down quickly if he/she is excited" (emotion regulation), "I expect my child to have good or very good grades in mathematics" (academic achievement), "I expect my child to never steal or cheat" (anti-social behavior), "I expect my child to be helpful if someone else is hurt, ill or sad" (pro-social behavior), and "I expect my child to know what to do in order to be part of a group" (peer relations).

For the present study, the German version of the questionnaire was translated to Chinese by two bilingual students. Afterwards the Chinese version was translated into German again by two other native bilingual persons who had never seen the original German questionnaire. Comparisons with the original questionnaire led to a few modifications in the Chinese version to achieve maximum equivalence in meaning before it was finally handed to the Chinese sample.

Test of Measurement Invariance

Different levels of measurement invariance have to be distinguished: At the lowest level, *configural measurement invariance* is met when the general factor structure is the same across groups, including the number of factors and the general pattern of factor loadings (Rudnev, Lytkina, Davidov, Schmidt, & Zick, 2018). *Metric invariance* is achieved when the items have the same factor loadings in both groups. This is tested by fixing the factor loadings to be equal across the groups and comparing the fit with the less restrictive model via chi-square tests. The third level of measurement invariance is the *scalar invariance*. This means that the latent scales have the same zero point and the same units across both groups. To achieve this level of measurement invariance, the intercepts of the factor loadings also have to be the same across the compared groups. Scalar invariance indicates that the latent variables can be compared meaningfully (Vandenberg & Lance, 2000).

The assumed factor structure of the questionnaire was confirmed in a confirmatory factor analysis (CFA) for the German sample using AMOS Version 22. Running a CFA for the Chinese sample showed insufficient model fit. Thus, an explorative factor analysis (EFA) was run using SPSS Version 24. This EFA identified four of the five expected factors as suitable, so that the items of the original fifth factor (anti-social behavior) were deleted before further analysis were calculated. Additionally, one item ("I expect my child to have good or very good grades in history or social science") belonging to the "grade"-factor had to be deleted because in the Chinese sample it showed a significantly lower loading than the other three items, even below the criterion to include it ($b = .35$). To test for measurement invariance, chi-square tests were run comparing the results of the CFA of the four-factor model in both groups first (Milfont & Fischer, 2011). Following this analysis, single scale comparisons were computed,

first restricting the regression weights to be equal and then restraining the intercepts to be equivalent across the two groups as well. As there were only three items measuring academic achievement, it was impossible to test for measurement invariance of this scale due to the lack of degrees of freedom. Thus, the three achievement-related items could only be compared across the two groups on item-level.

For improving model fit, we incorporated a number of statistically significant error covariances based on the modification indices. One of the error covariances was applied to two items of the factor prosocial behavior, and two covariances were applied to the factor emotion regulation. The fit statistics indicates configural measurement invariance for prosocial behavior and peer relations. Although the significant chi-square test indicated a less than ideal configural measurement invariance for emotion regulation, the result of this test should not be exaggerated because in the case of large sample sizes, tiny discrepancies between the observed parameters and its expected values under a null hypothesis are likely to be adjudged as evidence of “misfit”. Therefore, it has been recommended to divide the chi-square score by the degrees of freedom and to use scores smaller than 2 to 5 as indicators of adequate model fit (Schumacker & Lomax, 2004). Thus, the observed scores of 2.0 to 2.09 for emotion regulation can be interpreted as an acceptable fit of the configural invariance model (Table 1).

The analysis indicated metric invariance and partial scalar invariance for emotion regulation (5 of 7 items), peer relations (3 of 4 items), and prosocial behavior (2 of 4 items; Table 1), which seems to be enough to compare the samples meaningfully (Byrne, Shavelson, & Muthen, 1989), as it is unlikely to receive completely invariant scales across different countries.

[Include Table 1 about here]

In the current investigation, each factor was found to be internally consistent in both the German and the Chinese samples (emotion regulation, $\alpha = .93/92$; pro-social behavior, $\alpha = .78/75$; peer relations, $\alpha = .80/83$).

RESULTS

Starting with descriptive results, it's interesting to point out that parental expectations were, on average, medium to high (Table 2). For German parents they ranged from 3.24 (natural sciences) to 4.27 (peer relations) and for Chinese parents the range was 3.98 (emotion regulation) to 4.39 (math). Comparisons across the assessed domains indicated that expectations about peer relations were highest in both samples and showed the smallest between-group difference. The highest between-group differences were found regarding expected school grades, and expectations about grades in natural sciences in particular.

[Insert Table 2 about here]

T-tests were calculated in order to compare expectations of Chinese and German parents. Testing the first hypothesis, that parental expectations regarding academic achievement are higher in China than in Germany, the results of the *t*-tests were in favor of our hypothesis (language: $t = 10.46$, $df = 415$, $p < .001$; math: $t = 10.90$, $df = 414$, $p < .001$; science: $t = 11.73$, $df = 418$, $p < .001$). This means that parental expectations about academic achievement were higher in China than in Germany. According to Cohen (1992), the size of between-group differences can be interpreted as large (language: $d = 1.03$; math: $d = 1.05$; science: $d = 1.14$).

The results also supported our second hypothesis that parental expectations of their child's emotion regulation are higher in Germany than in China ($t = 3.69$, $df = 419$,

$p < .001$). The size of between-group differences can be interpreted as small ($d = .37$) (Cohen, 1992).

The third hypothesis, stating higher expectations about pro-social behavior in Chinese as compared to German parents, could not be confirmed ($t = 1.58$ $df = 419$, $p = .12$). Results indicated equal levels ($d = 0.17$) of expectation in Chinese as well as German parents.

The final hypothesis, predicting higher expectations regarding peer relations for German as compared to Chinese parents, was also not supported ($t = 1.00$ $df = 419$, $p < .32$). Similar to the results regarding the third hypothesis, results showed about the same levels ($d = .10$) of parental expectations in Chinese and German parents.

DISCUSSION

We found that Chinese parents had higher expectations than German parents with regard to academic achievement and emotion regulation of their children, while expectations of peer relations and prosocial behavior did not differ between the two groups. Looking at the factor structure, it is remarkable that four out of the five expected factors could be found in both samples. The factor which was deleted from our study was “avoidance of anti-social behavior”, which might have had a somewhat different meaning in Germany and China. An example here could be that lying to keep one’s face, if one does not know the correct answer, is rather expected in China than rejected (Mavrides, 2009), while lying in Germany is viewed as anti-social behavior (e.g., Achenbach, 2001).

The first hypothesis, that parental expectations regarding academic achievement are higher in China than in Germany, proved to be true for each of the assessed school subjects. Chinese parents expect their children to perform well in

examinations because only high-achieving students may enroll in prestigious universities and are recruited for satisfactory jobs (Zhang & Kong, 2012). As the discrepancies in income between college-educated and non-college educated individuals are particularly high in China and other Asian societies, high emphasis on academic achievement has benefits for the Chinese parents and their children (Rao, McHale, & Pearson, 2003). Students' higher academic success indicates that the Chinese parents will be more able to rely on the financial support of their child when getting older (Li et al., 2004; Trommsdorff & Nauck, 2005). Our findings are also in line with what some authors claimed to be "achievement-focused Chinese parenting" (Chua, 2011; Fong, 2007). Rather astonishing may be the finding that parental expectations regarding academic achievement in Germany were lowest across all assessed domains. However, we asked whether they expected good or very good marks, and such expectations would only be realistic for parents of students who attend the highest school track (Ditton, 2013). In the present study, only 47% of the children of the German parents attended the highest school track. Not attaining good or very good grades also tends to have less negative consequences for future careers in Germany than in China, given the well-developed system of vocational training and the lack of qualified workers in many vocational fields (Koppel & Plünnecke, 2009).

The observed higher parental expectations regarding emotion regulation in China than in Germany reflect Asian values encouraging emotional control and restraint (suppression) as compared to Western values encouraging free and open emotional expression (Butler, Lee, & Gross, 2007): As the expression of emotions would draw the attention to the individual and could – in the case of expressing negative emotions – lead to a momentary disruption of group harmony, emotion expression is less desirable in collectivistic cultures. In contrast, showing emotions is crucial for acquiring

knowledge of social norms in western countries and this is even stronger in Germany (Hareli, Kafetsion, & Hess, 2015). Thus, it is not that important to hide them like in China.

Regarding the observed lack of statistically significant mean-level differences in parental expectations regarding pro-social behavior, we have to keep in mind that the difference between the mean scores went in the expected direction, and the difference may become statistically significant in studies with larger sample sizes. Additionally, prosocial behavior is a desirable characteristic not only in collectivistic cultures but also in individualistic, western cultures (e.g., Goodman, 1997; Padilla-Walker & Carlo, 2007) which could have led to the observed weaker between-group differences.

The observed lack of between-group differences in parental expectations about peer relations contradicts Chua's claims about the lack of importance of peer relations for Chinese parents (Chua, 2011) and the smaller amount of spare time of Chinese as compared to German children, which could be used for spending time with their peers (OECD, 2009, 2011). However, it is plausible to argue that, if there is only a limited amount of time for peer interaction, the ability to use this time for building and maintaining peer relations has to be pretty high. Globalization could be another reason for the lack of observed cultural differences, as Way et al. (2013) pointed out that the "newer" Chinese values tend to be westernized.

All in all, it has to be said, that despite the fact that we found between group differences for expectations regarding academic achievement and emotion regulation, we did not find significant between group differences for parental expectations regarding social behavior and peer relations. This means that many parental expectations are universal across cultures to a certain extent, and differences are only

gradual, which makes sense, as for example developmental tasks are roughly the same all over the world (Havighurst, 1948).

Limitations

Firstly, we did not manage to achieve full scalar measurement invariance. In addition, the number of items was too low for testing scalar invariance of the assessment of expectations about academic achievement. Another limitation is the fact that the Chinese parents lived in two large cities so that the rural parts of China are not represented. One also has to bear in mind that fathers were underrepresented among our respondents, as it is often the case in research on parenting. Parents also filled in the questionnaire at home, so there was no control over whether they filled it in alone or whether they talked to their children or partner before answering our questions.

Future Directions

Future research should test whether our results can be replicated in samples from rural areas of China, where life is more traditional than in urban areas. It would also be interesting to find out what lies behind parental expectations, how they are formed and what parents from both countries do to make these expectations become true. Efforts should also be undertaken to broaden the range of assessed parental expectations (e.g., including expectations about autonomy) and for further increasing measurement invariance (e.g., by including more items on academic achievement). Further research could follow up on the question of how parents adapt if their expectations are not met.

Implications for Practice

Summarizing the finding that parental expectations are partly culturally specific, it becomes clear that practitioners in every area working with parents should bear this information in mind. For example, if parents go to a child psychiatrist because the child is having some difficulties, the psychiatrist should give advice to the parents always in

the background of their cultural milieu. The findings are also relevant for parents that move to live in another country. There is the saying other countries, other customs, which also applies for parental expectations. This should be thought of by parents if they talk to others in their new living environment and if it appears strange to them why all parents seem to have different expectations regarding their children than they have for their own.

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TABLES

Table 1: Test for Invariance between the Chinese and German Measures

Domain	$\chi^2 (df)$	χ^2 / df	$\Delta\chi^2 (df)$	CFI	RMSEA
Emotion regulation					
Configural invariance	50.21*** (24)	2.09	-	.99	,05
Metric invariance	59.94*** (30)	2.00	9.67 (6)	.98	,05
Partial scalar invariance ^a	70.84*** (35)	2.02	10.90 (5)	.98	,05
Prosocial Behavior					
Configural invariance	1.29 (2)	0.65	-	.99	,00
Metric invariance	1.72 (5)	0.34	0.43 (3)	.99	,00
Partial scalar invariance ^b	7.45 (9)	0.83	5.73 (4)	.99	,03
Peer Relations					
Configural invariance	6.72 (4)	1.68	-	.99	,04
Metric invariance	10.25 (7)	1.46	3.35 (3)	.99	,03
Partial scalar invariance ^c	14.58 (10)	1.46	4.33 (3)	.99	,03

Note: CFI = comparative-fit-index; RMSEA = root-mean-square-error-of-approximation; *** $p < .001$;

^a5 of 7 items met the criterion of scalar invariance

^b2 of 4 items met the criterion of scalar invariance

^c3 of 4 items met the criterion of scalar invariance

Table 2: Means, Standard Deviation and Effect size of the four researched scales

Domain	Mean	SD	Mean	SD	Cohen's <i>d</i>	<i>t</i>	<i>df</i>	<i>p</i>
	Germany	Germany	China	China				
Emotion	3.70	.75	3.98	.76	.37***	3.69	419	<.001***
Regulation								
Prosocial Behavior	3.99	.65	4.10	.66	.17	1.58	419	< .12
Peer Relations	4.27	.58	4.33	.62	.10	1.00	419	< .32
Academic								
Achievement								
Language	3.37	1.00	4.29	.78	1.03***	10.46	415	<.001***
Math	3.44	1.05	4.39	.73	1.05***	10.90	414	<.001***
Science	3.24	1.01	4.28	.80	1.14***	11.73	418	<.001***

Note: *** $p < .001$

**7.1.2 Study 2 – Parental Educational Expectations and Academic Achievement
in Children and Adolescents – A Meta-Analysis**



Parental Educational Expectations and Academic Achievement in Children and Adolescents—a Meta-analysis

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Abstract

The present meta-analysis assessed concurrent and longitudinal associations between parental educational expectations and child achievement, and factors that mediate the effect of expectations on achievement. A systematic search in electronic databases identified 169 studies that were included in a random-effects meta-analysis. We found small to moderate bivariate cross-sectional ($r = .30$) and longitudinal associations ($r = .28$) between parental expectation and achievement which persisted after statistically controlling for socioeconomic status. Associations varied, in part, by children's age, socioeconomic status, ethnicity, matching of type of expectations and achievement, type of expectation assessed, publication status, and informant. The analysis of cross-lagged effects indicated that parental expectations predicted change in child achievement, thus indicating that expectations had an effect over and above the effect of prior achievement. Effects of expectations on change in achievement were even stronger ($r = .15$) than the effects of achievement on change in expectation ($r = .09$). Parental expectations tended to be higher than the child achievement. Associations between expectations and achievement were partially mediated by educational expectations in the offspring, child academic engagement, and academic self-concept, and to a lesser extent, by parental achievement-supportive behaviors. We conclude that parents are recommended to communicate positive educational expectations to their children. The transmission of positive expectations to the offspring and the encouragement of academic engagement seem to be more effective in realizing parental expectations than parental behavioral academic involvement such as checking homework and staying in contact with teachers.

Keywords Academic achievement · Expectation · Expectancy · Parents · Meta-analysis

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Introduction

Parents may influence the academic success of their children in many ways, from stating expectations about their academic achievement to the multiple behaviors parents employ at home and in the school to advance children's educational outcomes, such as attending parent-teacher conferences or helping with homework (e.g., Jeynes 2005, 2007). The present study addressed educational expectations that refer to the anticipation of attainment at school or university (Mello 2008). They include short-term expectations for grades on the next exam or at the end of the present academic year, as well as long-term expectations for the final educational attainment, such as completing high school or a definite number of years of schooling (Gill and Reynolds 1999). Expectations differ from aspirations in that expectations tend to be more obtainable than aspirations, and to show stronger associations with achievement (Goldenberg et al. 2001). According to Reynolds and Pemberton (2001), educational aspirations and expectations reflect a difference between what individuals wish or hope to achieve and what they realistically expect to achieve.

Although bivariate concurrent associations of parental educational expectations with students' academic achievement have often been reported (Castro et al. 2015; Danişman 2017; Jeynes 2003, 2005, 2007; Philippson 2013; Tan 2017), five points need to be addressed for a deeper theoretical understanding of the relations between parental expectations and students' achievement.

The first point refers to the question whether this association may be based on a third variable rather than reflecting an effect of parental expectations. Parental educational attainment or parental socioeconomic status (SES) is a relevant third variable because parents with higher SES tend to have higher educational expectations for their children and provide more of an achievement-supportive environment, and their children are more likely to succeed in school (Hughes et al. 2013; Pingault et al. 2015). As parental expectations are easier to change than parental SES, an independent statistical effect of parental expectations is relevant for planning interventions aimed at promoting students' achievement.

Second, bivariate concurrent associations of parental expectations with students' achievement could indicate that expectations affect achievement (= parental effect) and/or that previous achievement affects present parental expectations (= child effect). For example, studies by Briley et al. (2014) as well as Loughlin-Presnal and Bierman (2017) provided some support for bidirectional associations between parental expectations and student achievement, but in the latter study, cross-lagged effects were inconsistent across different waves. A systematic analysis of cross-lagged effects is important for regarding whether expectations are only correlated with academic achievement because of being to some extent accurate or whether they have an effect over and above the effect of prior achievement.

Third, for a full understanding of the relationship between parental expectations and student achievement, it is not only relevant to analyze correlations between both variables but also to analyze whether there are systematic differences between their mean levels and whether these differences change over time. As most parents tend to value high academic achievement (Cheung and Pomerantz 2015), parental expectations about future academic achievement may be, on average, higher than the level of the present achievement, thus motivating their child to improve academically. However, researchers have suggested that overly high parental expectations cause distress and may undermine achievement motivation (Strom and Boster 2007). Thus, we need knowledge on the size of discrepancy between expectations and achievement and on whether the accumulation of achievement feedback leads to a reduction of the expectation-achievement gap over time (Seginer 1983).

Fourth, parental expectations are mental states that cannot directly influence students' achievement. In order to understand how parental expectations affect students' achievement, we have to identify the variables that mediate the effects of expectations. The expectancy value model by Eccles can inform the search of mediators. It suggests a cascade process: Parental beliefs and values trigger parental behavior geared toward promoting children's engagement in a domain which, again, promote student's self-efficacy beliefs (self-concept) and task values, which finally affect child behavior and achievement (Simpkins et al. 2012). Related parental behaviors include role modeling, encouragement and reinforcement, provision of activity-related experiences (e.g., of educational materials), and parent-child coactivity (e.g., learning together) (Eccles 1993). The model has often been tested, but the contents of parental expectations and task values differed from the content of expectations in the present meta-analysis. Seginer (1983) proposed three mediators of the effects of parental expectations about the level of their child's academic achievement that overlap with the Eccles model: (a) Communicated parental expectations may affect the expectations of their child, which, again, affect academic motivation and achievement of their child. (b) Higher parental expectations could lead to parental achievement-supporting behaviors, such as facilitation of cognitively stimulating activities or help with homework. (c) Parents with higher educational expectations may make more use of differential reinforcement of achievement-related behaviors, such as rewards for success and punishment for failure. More recently, Yamamoto and Holloway (2010) added another possible mediator: Parents with high educational expectations may try to promote more positive teacher perceptions of the child's capabilities, which could positively affect teacher behaviors, including assessment of the child's performance. Knowledge on mediators is relevant for guiding parents on how to promote the fulfillment of their expectations.

Finally, for fully understanding the interplay of parental expectations and students' achievement, it is relevant to identify conditions that moderate the size of the association because they define conditions under which expectations are more likely to affect achievement and vice versa. The present meta-analysis addressed the following moderator variables.

Moderator Effects of Study Characteristics

Child Age Concurrent associations between parental expectations and child achievement may become stronger when children get older because parents can base their expectations on more information about previous achievements (Entwisle and Hayduk 1978). In contrast, effects of parental expectations on change in achievement may decline when children get older due to their autonomy development (Steinberg 2016). In line with this suggestion, Philippson (2013) found stronger concurrent associations in families of students from elementary school ($r = .37$) than in families of students from secondary school ($r = .19$).

Socioeconomic Status (SES) Parents of low income and educational background often adopt different rules than teachers in judging their children's achievement and may not realistically evaluate the educational demands when being unfamiliar with a given educational context (Balboni and Pedrabissi 1998; Fernández-Reino and Creighton 2016). Thus, we expected stronger associations of parental expectations and achievement in families with higher SES.

Cultural Differences Because higher loyalty to the family is expected from children in collectivistic cultures as compared to individualistic ones (Hofstede 2001), parental expectations may have a stronger impact on the academic achievement in collectivistic, non-Western

countries than in Western countries, as well as in ethnic minorities from Western countries with collectivistic cultural background compared to the ethnic majority. Danişman (2017) found stronger associations of educational expectations and achievement in collectivistic countries compared to individualistic countries but did not provide a separate test on *parental* expectations in particular.

Publication Status As non-significant results may be less likely to be published than significant results (the so-called file-drawer problem; Rosenthal 1991; Lipsey and Wilson 2001), we were interested in whether parental expectations would show stronger associations with academic achievement in published studies as opposed to those which have not been published. Danişman (2017) found stronger associations of expectations with academic achievement in published studies.

Kind of Expectation About Future Achievement Future grades may be easier to predict than the final educational degree of the child because grades are rather stable over shorter time intervals (Pekrun et al. 2017), and parents can use the present grades for predicting future grades. Thus, we expected stronger associations between parental expectations and academic achievement in studies that assessed expected grades rather than the expected final educational degree.

Matching of Type of Expectation and Type of Achievement We expected stronger associations between expectations and achievement if the types of both variables are matched (e.g., expected grades—achieved grades) rather than non-matched (e.g., achieved grades—expected college graduation).

Past Meta-analyses and the Present Research Questions

Up to now, five meta-analyses on bivariate (mainly concurrent) associations of parental involvement or cultural capital with academic achievement reported results on parental expectations (Castro et al. 2015; Jeynes 2003, 2005, 2007; Tan 2017). The mean size of the association of parental expectations with academic achievement varied between $r = .22$ (Castro et al. 2015) and $r = .40$ (Jeynes 2007). In addition, two meta-analyses on associations of parental educational expectations/aspirations found small to moderate bivariate associations with academic achievement ($r = .23$, Danişman 2017; $r = .19$ and $r = .37$, Philippson 2013). These meta-analyses did not analyze partial correlations that control for parental SES, longitudinal and cross-lagged correlations, mean-level differences, and mediator effects. Only one of them tested for moderator effects of study characteristics on the associations of parental expectations with student achievement: As already reported, Philippson (2013) found stronger associations if the students attended elementary school rather than secondary school. Because the five points that were highlighted in the Introduction section remained widely unaddressed in the available meta-analyses, we conducted a new meta-analysis that addressed these points.

We stated five research questions: First, how strong are bivariate concurrent and longitudinal associations between parental educational expectations and child achievement, and do these associations remain significant after statistically controlling for the confounding effect of parental SES? Second, do parental expectations predict change in achievement over time, and do the initial levels of student achievement predict changes in parental expectations? Third, in

the case of heterogeneous effect sizes, we asked for sources of heterogeneity. Fourth, as expectations could overestimate or underestimate academic achievement, we asked whether there are systematic differences between the mean levels of expectations and achievement and whether parents tend to maintain, downgrade, or increase their expectations over time. Finally, as parental expectations should have an indirect rather than a direct effect on the academic achievement in the offspring (Seginer 1983; Yamamoto and Holloway 2010), we asked which variables mediate the association between parental expectations and academic achievement. Data were available to analyze the empirical evidence for four potential moderators (students' expectations, students' academic engagement, students' academic self-concept, and parental achievement-supportive behaviors). Unfortunately, we did not find enough studies for meta-analyzing mediating effects of parental attempts to change teacher perceptions, parental role modeling, and of parental differential reinforcement.

Method

Studies were identified with a systematic search in the electronic databases PsycINFO, ERIC, Google Scholar, and PSYNDEX (a database of publications from German-speaking countries) by use of the following search terms: expectation AND (parents OR mothers OR fathers OR parental OR maternal OR paternal) AND (academic achievement OR educational attainment OR grades or grade point average). In addition, we checked the references sections of the identified papers for additional studies. If the full text was not available or if the paper provided insufficient effect size information, we tried to contact the authors for additional information.

Criteria for inclusion of studies in the present meta-analysis were:

- a) They assessed parental expectations about the academic achievement in their offspring.
- b) Bivariate or cross-lagged associations of parental expectations with academic achievement or mean level differences between both variables were reported or could be computed based on the available information.
- c) The mean age of the children was <20 years, which incorporates childhood and adolescence as defined by the World Health Organization (2018).
- d) The studies were published or presented before February 2019.

Studies were excluded if they reported only:

- a) Results on parental aspirations or on a combined measure of expectations and aspirations.
- b) If only multivariate analyses were reported that used more than achievement, expectations, and/or parental SES as predictor variables, and we did not get additional information from the authors: Effect sizes that controlled for different third variables cannot be meta-analytically combined (Lipsey and Wilson 2001).

We identified 655 papers. After screening and assessing for eligibility, we were able to include 169 studies in the present meta-analysis. The flow chart of the search for studies is provided in Fig. 1, and information on the studies included is provided in Appendices A1 and A2 (see supplementary online material). All studies were screened and coded by the first author, and a random sample of 20% of the studies was also coded by the second author (see Table 1 for coded study variables).

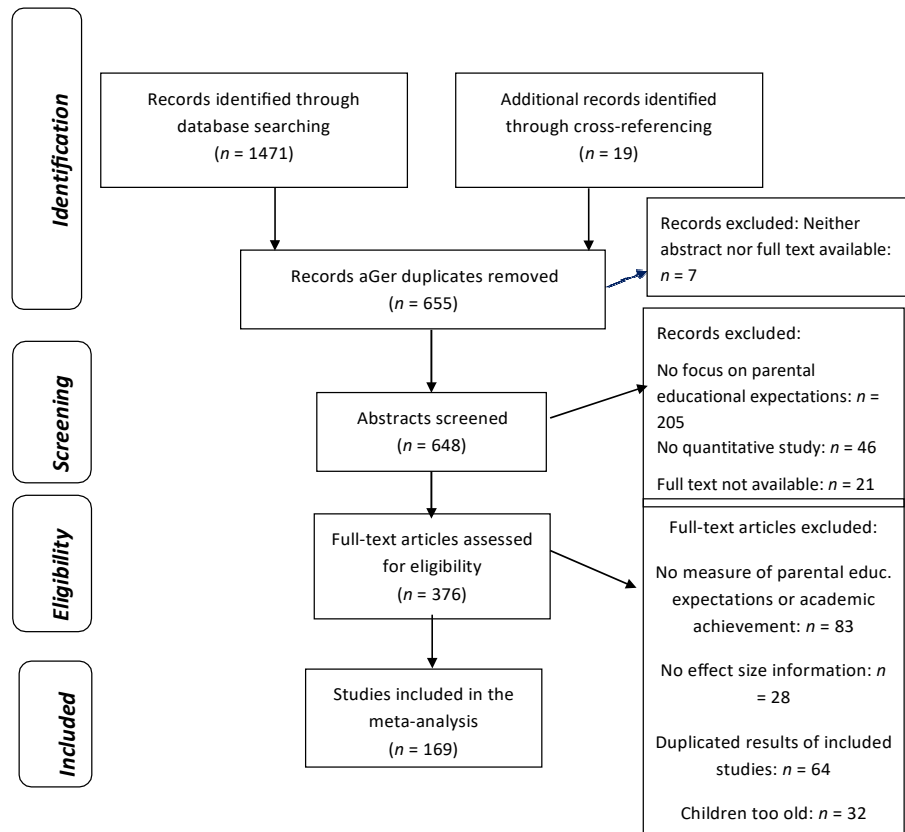


Fig. 1 PRISMA flow diagram

While most effect sizes were coded as (bivariate or partial) correlational coefficients, change in parental expectations and differences between levels of expectation and achievement were coded in standard deviation units. While bivariate correlations were reported in the papers, cross-lagged associations and *d*-scores had to be primarily computed manually based on correlational tables or means and standard deviations. Indirect effects and their standard errors also had to be computed manually from individual studies based on the correlation matrix and Sobel test (Sobel 1982). No mediation was tested if achievement had been assessed at an earlier point of measurement than parental expectations.

If the studies provided results for more than one group (e.g., ethnic majority vs. minority) or time interval, we entered them separately. In longitudinal studies with more than one time interval, the weight of the individual effect size was divided by the number of included effect sizes (based on Rosenthal 1991, p. 27) in order to avoid a larger influence of these studies on the total effect size compared to those with only one effect size. However, if more than one effect size was reported for the same group of participants and the same time interval (e.g., associations with grades in different subjects), we included the average effect size in order to minimize the inclusion of dependent effect sizes.

Table 1 Coded study variables

Variable	Scores	Inter-rater agreement
Number of parents	Continuous	ICC = .90
Child age	Continuous	ICC = .86
Percentage of families from Ethnic minorities	Continuous	ICC = .93
Socioeconomic status	3 = predominantly middle class, 2 = mix of middle/lower class, 1 = predominantly lowerclass	$\kappa = .75$
Publication status	2 = published/in press, 1 = unpublished	$\kappa = 1.0$
Study design	2 = longitudinal, 1 = cross-sectional	$\kappa = 1.0$
Country	1 = Western, 2 = non-Western	$\kappa = 1.0$
Interval between assessments (in years)	Continuous	ICC = .90
Kind of assessed expectations	3 = expectations for future grades, 2 = expectations for final academic degree, 1 = mixed/global expectations	$\kappa = 1.0$
Kind of assessed achievement	3 = grades, 2 = achievement test scores, 1 = highest attained educational degree	$\kappa = 1.0$
Matching of types of expectations and achievement	3 = complete match, 2 = partial match, 1 = no match	$\kappa = .88$
Source of information about academic achievement	3 = teachers/school records, 2 = parents, 1 = children	
Bivariate associations between expectations and achievement	Continuous	ICC = .95
Cross-lagged associations of expectations with change in achievement	Continuous	ICC = .84
Cross-lagged associations of achievement with change in expectations	Continuous	ICC = .80
Partial correlation of expectations with achievement (controlling for SES)	Continuous	ICC = .82
Correlational stability of expectations	Continuous	ICC = 1.00
Correlational stability of achievement	Continuous	ICC = 1.00
Indirect statistical effects of expectations on achievement	Continuous	ICC = .82
Difference between the level of expectation and the level of later achievement	Continuous	ICC = .88
Difference between achievement and later expectation	Continuous	ICC = 1.0
Change in expectations over time	Continuous	ICC = .88

ICC intra-class coefficient

Statistical Integration of the Findings

Calculations were performed with standardized procedures outlined by Lipsey and Wilson (2001) and Borenstein et al. (2009), and the *Comprehensive Meta-Analysis* software (Borenstein et al. 2005). We computed random-effects models and the method of moments. The correlations were transformed using Fisher's *r*-to-*z* transformation, and *d*-scores were transformed to Hedges' *g*. Outliers that were more than two standard deviations (*SD*) from the mean of the effect sizes were recoded to the value at two *SDs*. Then, weighted mean effect sizes and 95% confidence intervals (CI) were computed. Significance of the mean was tested by dividing the weighted mean effect size by the standard error of the mean. To compare the mean effect sizes with the original effect sizes, the mean *z* scores were later converted to the

original metric of product–moment correlations. Based on Cohen (1992), correlation coefficients of $r = .10$ were interpreted as small, of $r = .30$ as medium, and of $r = .50$ as large. Similarly, scores of $d = .20$ were interpreted as small, of $d = .50$ as medium, and of $d = .80$ as large. As measures of heterogeneity, we computed the Q statistic (indicating whether there is significant heterogeneity), T^2 (the estimated variance of the true effect sizes), and I^2 (the proportion of the observed variance that reflects variance in true effect sizes). For moderator analysis, the parameter-based meta-analytic structural equation modeling approach was used (Cheung and Cheung 2016): The direct and indirect effects from each individual study were coded in the first step. Then, random-effects meta-analyses were applied for computing the weighted mean direct and indirect effects. Finally, the trim-and-fill algorithm was used for checking whether the results may be influenced by a publication bias (Duval and Tweedie 2000). This algorithm tests for funnel-plot asymmetry. If significant asymmetry is detected, it imputes the effect sizes of possibly missing studies (that are needed for producing a symmetric funnel plot) and recalculates the mean effect sizes.

Results

The 169 studies provided data on 538,548 parents. The children had a mean age of 12.36 years ($SD = 4.02$), about 50.1% were girls. Most parental data referred to mothers (86.5%), and 37.3% of the parents were members of ethnic minorities. Most studies assessed expectations about the future highest attained educational degree (109), while 38 studies assessed expectations about future grades and 22 studies applied global (combined) measures of parental educational expectations. Ninety-four studies analyzed longitudinal data (mean length 2.90 years, $SD = 3.57$) while the other studies analyzed data only from one point of measurement. While 134 studies have been published, 35 studies were unpublished.

Bivariate and Cross-Lagged Associations of Expectations with Academic Achievement

Cross-sectional studies found a moderate positive bivariate correlation of parental expectations with academic achievement of the children ($r = .30$, CI .28 to .32, Table 2). Similarly,

Table 2 Weighted mean correlates of parental expectations and stability coefficients

Correlate	k	r	95% CI		Z	Q	T^2	I^2
Expectation ₁ –achievement ₁ (CS)	231	.30	.28	.32	29.18***	257.77*	.019	11.1%
Expectation ₁ –achievement ₂	103	.28	.26	.30	25.12***	118.22*	.009	14.5%
Achievement ₁ –expectation ₂	61	.28	.24	.31	15.13***	81.36*	.017	26.3%
Partial corr. exp. ₁ –ach. ₁ (SES controlled)	65	.28	.25	.30	18.61***	81.11	.013	21.1%
Partial corr. exp. ₁ –ach. ₂ (SES controlled)	42	.26	.23	.30	14.37***	27.87	.013	0%
Expectation ₁ –change achievement	77	.15	.13	.17	13.03***	75.63	.006	0%
Achievement ₁ –change expectation	40	.09	.06	.12	6.05***	34.26	.005	0%
Correlational stability of expectations	43	.55	.52	.59	18.33***	41.87	.040	0%
Correlational stability of achievement	52	.59	.55	.63	22.53***	53.33	.041	0.1%

The subscript numbers 1 and 2 indicate times of measurement

k number of effect sizes included in the analysis, r weighted effect size, Z test for significance of r , 95% CI lower and upper limits of 95% confidence interval, Q test for homogeneity of effect sizes, T^2 variance of true effect sizes, I^2 proportion of the observed variance that reflects variance in true effect sizes, CS cross-sectional data

* $p < .05$, *** $p < .001$

longitudinal studies identified small to moderate bivariate correlations of initial parental expectations with later achievement ($r = .28$, CI .26 to .30) and of initial achievement with later parental expectations ($r = .28$; CI .24 to .31). Both effect sizes do not differ ($Q(1) = .00$, $p < .98$). Q tests showed that the size of the bivariate associations between parental expectations and academic achievement was not significantly reduced when statistically controlling for parental SES ($Q(1) = .12$, $p < .73$, and $Q(1) = .37$, $p < .55$; Table 2). Trim-and-fill analysis indicated funnel plot asymmetry in the distributions of the concurrent correlations, of the correlations of initial achievement with later expectations, and of the partial concurrent correlations that controlled for SES. Between 10 and 20 effect sizes of possibly missing studies were added. Adding these effect sizes lead to an increase in the concurrent association of expectations and achievement ($r_{\text{cor}} = .32$, CI .30 to .33), to a decrease in the association between initial achievement and later expectation ($r_{\text{cor}} = .24$, CI .19 to .29), and to a decrease in the concurrent partial correlation that controlled for SES ($r_{\text{cor}} = .23$, CI .20 to .26) (see Appendix 3).

For addressing the direction of effects, we analyzed cross-lagged associations of expectations and achievement. Higher initial parental expectations predicted an increase in child achievement over time ($r = .15$, CI .12 to .17). Similarly, higher initial achievement predicted an increase in parental expectations ($r = .09$, CI .06 to .12). Both associations were small to very small (Cohen 1992). Q test indicates that the statistical effect of expectations on change in achievement is significantly larger than the statistical effect of achievement on change in expectations ($Q(1) = 7.86$, $p < .01$). The trim-and-fill analysis identified funnel plot asymmetry in the former analysis. Adding six possibly missing effect sizes leads to a very small increase in the association of initial expectations with change in achievement ($r_{\text{cor}} = .16$, CI .13 to .18; Appendix 3).

We also found strong correlational stability of parental expectations ($r = .55$, CI .52 to .59) and child achievement ($r = .59$, CI .55 to .62) over time. The trim-and-fill analysis indicated that the true stability of parental expectations might even be slightly higher ($r_{\text{cor}} = .58$, CI .50 to .65).

Analysis of Moderator Effects

Because the three bivariate associations of expectations with achievement were heterogeneous, we searched for moderator variables on these effect sizes. As shown in Table 3, significant moderator effects were identified in the analysis of cross-sectional data and of longitudinal bivariate associations of achievement with expectations. Concurrent associations and associations of initial achievement with later parental expectations were stronger in families of older children. Concurrent associations of parental expectations with academic achievement were also stronger in the case of higher parental SES and in studies with a lower percentage of members of ethnic minorities. Prospective associations of achievement with expectations were stronger in published studies than in unpublished studies, as well as if the expectations referred to future grades rather than to the final academic degree. In addition, we found stronger longitudinal associations if the types of expectations and achievement were matched.

We could not analyze moderator effects of the quality of assessment of parental expectations because of the lack of variation: Most studies used single-item indicators with unproven validity. However, we detected a mono-informant bias. Cross-sectional studies that assessed both expectations and achievement via parental reports found larger effect sizes than studies that collected achievement information from other sources, such as school records (Table 3).

Table 3 Moderating effect of study characteristics on the association of parental expectations with child achievement

Moderator	Achievement—expectation: (CS)				Achievement—expectation:				Expectation—achievement:						
	<i>k</i>	<i>B</i>	β	<i>Z</i>	<i>R</i> ²	<i>k</i>	<i>B</i>	β	<i>Z</i>	<i>R</i> ²	<i>k</i>	<i>B</i>	β	<i>Z</i>	<i>R</i> ²
Child age	203	.011	.27	3.78***	.07	54	.012	.34	2.50*	.11	96	.005	.17	1.59	.03
SES	220	.064	.19	2.75***	.04	61	.036	.08	.58	.01	103	.032	.13	1.28	.02
% ethnic minority ¹	103	-.002	-.43	-4.62***	.18	31	-.000	-.12	-.64	.01	53	-.001	-.13	-.92	.02
Country ²	231	-.015	-.04	-.58	.00	61	.002	.00	.03	.00	103	.054	.10	1.04	.01
Publication status ³	231	-.014	-.04	-.52	.00	61	.136	.39	3.21***	.15	103	.034	.12	1.17	.01
Kind of expectation ⁴	208	-.047	-.13	-1.82	.02	56	-.171	-.46	-3.66***	.21	95	-.041	-.14	-1.31	.02
Matching: expectations achievement ⁵	231	.048	.12	1.81	.02	60	.200	.52	4.61***	.28	102	.073	.31	3.24**	.10
Mono-informant bias ⁶	231	.140	.20	3.01***	.04	-	-	-	-	-	103	.107	.11	1.08	.01

k number of effect sizes, *B*/ β non-standardized/standardized regression coefficient, *Z* test for significance of the regression coefficient, *R*² explained variance, *SES* socioeconomic status

¹ Only studies from Western countries were included in this analysis

² Non-Western country = 2, Western country = 1

³ Published = 2, unpublished = 1

⁴ Expectations about the highest attained educational degree = 2, expectations about grades = 1 (studies with a sum measure of both kinds of expectations were excluded from the analysis)

⁵ 3 = yes, 2 = partial, 1 = no

⁶ 2 = yes, 1 = no

p* < .05, *p* < .01, ****p* < .001

Note that all longitudinal studies on associations of initial achievement with expectations at follow-up had collected achievement information from an independent source.

Differences Between Expectations and Achievement

A few studies had assessed parental expectations and child achievement with the same scale, thus allowing to test whether expectations are higher than the actual achievement. As shown in Table 4, initial parental expectations exceeded later achievement ($g = .35$, CI .21 to .48). Similarly, parental expectations were higher than the previous academic achievement ($g = .78$, CI .52 to 1.04), and I^2 indicates that there was substantial heterogeneity between the four included effect sizes.

We also found some evidence for an increase in parental expectations over time. This effect was very small in a statistical sense ($g = .06$, CI .02 to .09). Trim-and-fill-analysis indicates that the true effect size may be somewhat stronger after adding 11 effect sizes of possibly missing studies ($g = .09$, CI .04 to .13).

Mediators of the Association of Parental Expectations and Academic Achievement

We tested mediating effects separately for each possible mediator because individual studies most often provided data for one mediator variable only and because effect sizes cannot be pooled across studies if they controlled for different third variables (Lipsey and Wilson 2001).

Children's academic expectations ($\alpha\beta = .06$, CI .05 to .08), academic engagement (such as persistence or completing homework; $\alpha\beta = .05$, CI .03 to .08), and academic self-concept (e.g., assessed by the scholastic competence scale of the Self-Perception Profile for Children, Harter 1985; $\alpha\beta = .04$, CI .02 to .06), as well as parental achievement-supportive behaviors (such as motivating the child to do his/her best at school; $\alpha\beta = .01$, CI .00 to .02) were significant mediators (Table 5). Q -tests indicate that the mediator effects of children's educational expectations, academic engagement, and academic self-concept were significantly stronger than the mediating effect of parental achievement-supportive behaviors ($Q(1) = 7.92, p < .01$ to $Q(1) = 32.50, p < .001$). In each analysis, there was only partial mediation because the direct path from parental expectations to academic achievement (τ') remained significant after including the mediator.

Table 4 Analysis of mean-level differences

Variables	<i>k</i>	<i>g</i>	95% <i>CI</i>		<i>Z</i>	<i>Q</i>	<i>T</i> ²	<i>I</i> ²
Expectation ₁ –achievement ₂ ^a	22	.35	.21	.48	5.07***	22.67	.083	7.4%
Achievement ₁ –expectation ₂ ^a	4	.78	.52	1.04	5.90***	13.49***	.063	77.7%
Expectation ₁ –expectation ₂ ^b	51	.06	.02	.09	2.76**	46.12	.022	0%

The subscripts 1 and 2 indicate times of measurement

k number of effect sizes, *g* weighted mean difference, *Z* test for significance, 95% *CI* lower and upper limits of 95% confidence interval, *Q* test for homogeneity of effect sizes, *T*² variance of true effect sizes, *I*² proportion of the observed variance that reflects variance in true effect sizes

^a Positive scores indicate higher expectations than achievement

^b Positive scores indicate an increase in expectations overtime

p* < .01, *p* < .001

Table 5 Analysis of mediating effects

Mediator	k	T	CI _T	α	CI _{α}	β	CI _{β}	$a\beta$	CI _{$a\beta$}	Q	r'	CI _{r'}
Child expectation	38	.29 ^c	.24	.34	.35 ^c	.39	.21 ^c	.25	.06 ^c	.08	.22 ^c	.18
Child academic engagement	30	.29 ^c	.22	.35	.19 ^c	.26	.37 ^c	.40	.05 ^c	.08	.25 ^c	.19
Child academic self-concept	17	.31 ^c	.25	.37	.19 ^c	.26	.23 ^c	.29	.04 ^c	.06	.27 ^c	.22
Parental achievement-supportive behavior	57	.32 ^c	.28	.35	.13 ^c	.18	.09 ^c	.13	.01 ^a	.02	.30 ^c	.27

The mean effect sizes r' and $a\beta$ do not always add to T because the sample weights of r/r' (Lipsey and Wilson 2001) differ from the sample weight of $a\beta$ (Sobel 1982). T bivariate association between parental expectation and child achievement, α association of parental expectation with the mediator, β association of mediator with achievement, $a\beta$ indirect effect of parental expectation on achievement, r' effect of expectation on achievement after addition of the mediator, k number of effect sizes, CI 95% confidence interval of the mean effect size, Q test of heterogeneity of $a\beta$

^a $p < .05$

^c $p < .001$

While three out of four mediating effects were homogeneous, the size of the mediating effect of child expectations varied between the included studies. We identified two sample/study characteristics that moderated the size of this mediating effect. Mediating effects were stronger in families of older children ($B = .013$, $\beta = .65$, $Z = 5.36$, $p < .001$). Further analyses showed that both the path from parental to child expectations ($B = .046$, $\beta = .60$, $Z = 4.98$, $p < .001$) and the path from child expectations to achievement ($B = .022$, $\beta = .54$, $Z = 3.75$, $p < .001$) were significantly stronger in families of older children. In addition, we found a moderating effect of the study design ($Q(1) = 22.43$, $p < .001$): The mediating effect of children's expectations was stronger in longitudinal studies ($k = 11$, $\alpha\beta = .13$; CI .10 to .16, $Z = 8.06$, $p < .001$, $Q = 13.62$, $p = .20$) than in cross-sectional studies ($k = 27$, $\alpha\beta = .04$; CI .02 to .06, $Z = 3.61$, $p < .001$, $Q = 21.57$, $p = .72$).

Discussion

The present meta-analysis found small to moderate bivariate associations between parental educational expectations and academic achievement of the children, and these associations persisted after statistically controlling for SES. Associations varied, in part, by child age, SES, ethnicity, type of expectation, matching of types of expectations and achievement, and informant. Cross-lagged analyses indicated that associations between parental expectations and child achievement were bi-directional. Parental expectations tended to be higher than child achievement. Children's educational expectations, academic engagement, and academic self-concept as well as parental achievement-supportive behaviors mediated part of the effect of parental expectations on child achievement, and the mediating effect of child expectations was stronger in older children.

The weighted mean bivariate associations between parental educational expectations and child achievement were within the estimations of previous meta-analyses (Castro et al. 2015; Danişman 2017; Jeynes 2003; Jeynes 2005; Jeynes 2007; Philippson 2013; Tan 2017). The present meta-analysis identified a source of heterogeneity between the effect sizes of previous studies. The observed stronger associations in families with older children explain the above-average effect size in the meta-analysis by Jeynes (2007) which included only students from secondary schools. As a moderating effect of age was found for associations of present achievement with future expectations rather than for associations of present expectations with future achievement, observed age differences mainly indicate that parents of older children can more reliably adjust their expectations as response to the previous achievement of their child.

The observed stronger concurrent associations of parental expectations with child achievement in families of higher SES and ethnic majority may indicate that these parents have more realistic expectations (Balboni and Pedrabissi 1998) and/or more (e.g., financial) resources to make their expectations come true. Although in Western countries most ethnic minorities tend to be more collectivistic than the ethnic majority (Hofstede 2001), this difference is unlikely to explain the observed moderating effect of ethnicity because we did not find stronger associations of expectations with achievement in studies from more collectivistic (non-Western) countries.

The detected stronger associations of initial achievement with future expectations in studies on expected grades rather than the final educational degree may indicate that the former studies address a shorter time interval that is easier to foresee. In addition, measures of achievement and expectations were more similar in studies on grade expectations (attained and expected

grades) than in studies on the final academic degree, which could lead to stronger correlations. In fact, a closer matching of the type of expectations and achievement produced stronger longitudinal associations because both variables addressed the same contents.

Although the distributions of many effect sizes were not completely symmetrical, we did not find clear evidence for a file-drawer problem because the trim-and-fill analysis found sometimes a slight *increase* in the effect size after adding possibly missing studies. Funnel plot asymmetry often emerges when the magnitude of effects depends on study characteristics, such as age or SES, and these study characteristics are not equally distributed across the studies (Vevea and Woods 2005). For example, studies with 4th graders or younger children were somewhat overrepresented (50%), and the moderator effect of age indicates that adding more studies on families with older children would increase the mean association between parental expectations and achievement.

As parents of higher SES tend to state higher expectations about the academic achievement of their children (e.g., Hughes et al. 2013; Pingault et al. 2015), it is important to test whether expectations have a unique statistical effect on achievement after statistically controlling for parental SES. This was, in fact, the case. Unfortunately, there were not enough studies to control for confounding effects of other third variables, such as parental intelligence or educational attainment of the neighborhood.

While previous meta-analyses focused on bivariate (mostly concurrent) relations between parental expectations and achievement, the present meta-analysis was able to show that expectations predicted change in achievement while achievement predicted change in expectations over time. Thus, we found that parental expectations do not only reflect, to some degree, the level of past or present achievement but also have a prospective effect on change in future achievement. This result has implications for promoting student achievement. In addition, we found adjustment of parental expectations in response to prior achievement. These results are in line with transactional and bidirectional models of human development (Bell 1968; Sameroff 2009). Although the present data provide deeper insights into the direction of effects, we need experiments for testing causal relations. For example, Brookover et al. (1965) raised parent expectations experimentally which resulted in improved grade point averages. Although initial parental expectations explained only 2.25% of the variance of later achievement in cross-lagged analysis, we have to be aware that the achievement score was highly stable over time, thus leaving limited additional variance to be explained.

Interestingly, we found stronger statistical effects of parental expectations on change in child achievement than effects of achievement on change in expectations. This result can be interpreted against the backdrop of a model of reactions toward expectation violations (Gollwitzer et al. 2018): There are two ways of reducing the discrepancy between expectations and achievement: Individuals may become active in order to bring the reality closer to their expectations (assimilation). As parental expectations were, on average, higher than student achievement, this means that parents try to improve the achievement of their children. Otherwise, they could change (and in the present case reduce) their expectations (accommodation). The higher the perceived importance of an expectation and the stronger the belief that the expectation can be fulfilled, the longer the individual will persist in the assimilative mode and the longer accommodative tendencies will be inhibited (Brandstädter and Rothermund 1993). Educational success of their children tends to be highly important for parents because of being connected to future career prospects and income (Cheung and Pomerantz 2015), thus promoting assimilative tendencies aimed at improving the achievement. Brandstädter and Rothermund (1993) assumed that for goals of high importance, even weak attainability beliefs

may suffice to maintain assimilative tendencies. Probably many parents will not downgrade their positive educational expectations until they are confronted with persistent, highly discrepant disconfirming information.

The final part of the analysis referred to variables that may mediate the effect of parental expectations on child achievement. Children's educational expectations, academic engagement, and academic self-concept, as well as parental achievement-supportive behavior, were identified as mediators, although the latter mediating effect was weaker than the other mediating effects. Our results indicate that transmission of positive parental achievement-related expectations and the promotion of a positive academic self-concept seem to be more promising than parental attempts to directly influence the achievement of their children, such as checking homework. However, the conclusion on influencing child expectations refers more to families of older children because the mediation effect was stronger among these families. Here, parental expectations were more effectively transmitted, and child expectations showed stronger associations with achievement. Future studies should test whether parents more convincingly communicate their expectations to the older adolescents and/or whether older students are more open to consider the expectations of their parents. Stronger associations of child expectations with achievement in older students indicate that older students strive harder to fulfill their educational expectations in the late school years when important decisions about future education and occupation are approaching (Heckhausen et al. 2012).

Limitations and Conclusions

Some limitations of the present meta-analysis have to be mentioned. First, although we included much more studies on associations of parental educational expectations with child achievement than the previous meta-analyses, the number of available studies was limited when addressing mean level differences between expectations and achievement and mediating effects of the child's academic self-concept. However, as the related analyses found significant effects, we did not miss significant effects because of restricted statistical power. Second, because there was minimal variation in the methodological quality of the studies, we could not test for moderating effects of this variable. Third, mediating effects had to be meta-analyzed for each mediator separately, because most studies provided data for only one of them. Fourth, although we included much more studies than previous meta-analyses in this field, we did not get access to some unpublished studies. Nonetheless, trim-and-fill analysis indicated only minor changes after adding the results of possibly missing studies. Finally, we could not analyze mediating effects of differential reinforcement of achievement-related behaviors and parental attempts to influence the teachers which have been proposed as further potential mediators (Seginer 1983; Yamamoto and Holloway 2010).

Despite these limitations, several conclusions can be drawn from the present meta-analysis. First, we conclude that parental educational expectations are a relevant predictor of change in academic achievement in the children, although the effect is small in a statistical sense. Parents are recommended to communicate reasonably high expectations to their children. Schools and school psychologists may be able to help parents reflect on the importance of communicating positive educational expectations to their children and the effects of these communications on child achievement. Nonetheless, given the present small to moderate effect sizes, effective interventions aimed at promoting academic achievement should not be limited to increasing parental expectations. In addition, the present results suggest that parental attempts to influence

their children's educational expectations work better in adolescence than at an earlier age. Although our data indicate that high parental educational expectations contribute to child achievement, we should not forget that very high expectations could also have negative effects on other outcomes, such as achievement-related stress (Agliata and Renk 2008).

Regarding future research needs, studies are recommended that include the full range of possible mediators and assess longitudinally mediating chains (e.g., from parental expectations to child expectations to child academic engagement to achievement; Simpkins et al. 2012). In addition, more knowledge is needed on how parents could efficiently influence the academic expectations in children and early adolescents. Furthermore, future research should specify the conditions under which parents change and do not change their educational expectations. As most studies assessed parental expectations with single-item indicators, the development of more reliable multi-item measures is also recommended. These suggestions could help with closing some gaps in our knowledge on the interplay of parental educational expectations and student achievement. As Eccles and colleagues have shown that other kinds of parental expectations and values (e.g., expectancies about the child's competence) also predict child behavior and achievement (e.g., Simpkins et al. 2012), we suggest to meta-analyze the results of their work and to test which kinds of parental expectations predict students' achievement best.

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7.1.3 Study 3 – Parental Expectations in Families of Children With and Without Mental Disorders

Abstract

We were interested in whether parents have lower expectations if the child has a mental disorder. We applied a questionnaire to parents who went to mental health services for their children and to an unaffected control group, asking them how they expect their child to behave in different situations. The items formed scales concerning emotion regulation, pro- and anti-social behavior, peer relations and academic achievement. Data from 50 parents of children at mental health centers and 214 controls show significantly lower expectations of parents of children with a mental disorder than in the control group in every assessed domain. Implications of the findings for family life and therapy with children with a mental disorder and their parents are discussed.

Keywords: expectations, parents, mental disorder

Parental Expectations in Families of Children With and Without Mental Disorders

Expectations can be defined as relatively stable assumptions about a certain future event or behavior (Carr, Gibson & Robinson, 2001), such as how other people will behave (Odhammar & Carlberg, 2015; Slepian & Ames, 2016). They are usually made up of experiences from the past, and are often based on a broad variety of information, which makes them hard to change (Rief et al., 2015; Swider & Babel, 2013). In addition, expectations are often higher than the past reality (e.g., Piquart & Ebeling, in press).

In order to develop an understanding of what kind of expectations parents may have for children of a certain age, one has to know the important age-associated developmental tasks. Havighurst (1948) came up with developmental tasks for different age periods. For example, he stated eight tasks which are important during adolescence. In the present study we addressed expectations about four aspects of development in early adolescence, which are known to be important developmental tasks (Havighurst, 1948) or challenges (Farley & Kim-Spoon, 2014) – namely regulation of one's emotions, peer relations, academic behavior, and responsible social behavior.

The present study asks whether the few available studies regarding the association of parental expectations and having a child with a mental disorder indicate whether parents of children with mental disorders tend to have lower expectations about the future behavior of their child than parents of healthy children. Mental disorders are defined as deviations from the norm in behavior or thinking following a certain pattern, while other areas of functioning are just like everyone else's (APA, 2013). They can be classified as internalizing (like anxiety disorders) or externalizing (like conduct disorders) (APA, 2013), depending on whether the problematic behavior

affects oneself or others. For example, children with a conduct disorder tend not to stick to rules, beat others or don't behave properly in social contexts. Children who are affected by attention deficit hyperactivity disorder (ADHD) are unconcentrated, hyperactive and impulsive, which might also, lead to social problems. Anxiety disorders refer to the fear of certain stimuli like spiders, dogs or social situations but there are also unspecific anxieties, like the generalized anxiety disorder.

In a recent study, Swedish researchers discovered a strong negative association between children's externalizing problem behavior and parental expectations regarding their child's academic achievement and a weak negative association of internalizing problems with academic expectations (Almroth, László, Kosidou, & Galanti, 2019). Kortlander, Kendell, and Panicelli-Mindel (1997) stated that mothers of anxious children expect them to show worse coping strategies and thus tend to overprotect them, which, in turn, amplifies the problematic behavior of their children. In fact, parents of children with anxiety disorders displayed lower expectations regarding academic and social outcomes of their offspring compared to parents of healthy children (Eisen, Spasaro, Brien, Kearney, & Albano, 2004). In families of children with autism—a severe developmental disorder—parents showed more negative expectations about future outcomes of their children, like academic success or social competence, compared with parents of healthy children (Ivey, 2004).

The effect of mental disorders on expectations of others seems to be far reaching, as associations have not only been found in parents but also in teachers. Simply letting them know a child suffers from ADHD caused them to lower their expectations regarding academic success, as well as achievement-related behavior (Batzle, Weyandt, Janusis, & DeVietti, 2010; Ohan, Visser, Strain, & Allen, 2011). Such an effect was also found for several other diagnoses (Roig, 2011).

According to Stinnett, Crawford, Gillespie, Cruce, and Langford (2001), people might have certain expectations simply because a person is labeled with, for example, a psychiatric diagnosis. This so-called labeling bias has been shown in various fields and could lead to a reduction of parental expectations about the behavior of children with a mental disorder. Many parents are known to react to new circumstances, rather than preventing them in advance, which might also lead to lower expectations regarding future behavior, once they realize their child shows inappropriate behavior (Pescosolido, Fettes, Martin, Monahan, & McLeod, 2007).

Still, differences between parental expectations of mentally healthy children and children with a mental disorder might be smaller than expected due to certain reasons. First, parents usually have the tendency to expect the behavior of their child and the results of his or her behavior to improve (e.g., Piquart & Ebeling, in press; Yamamoto & Holloway, 2010). In the case of parents seeking mental health services for their child, they might expect that these services could lead to general improvement of their child's behavior and success in life. Second, parents could interpret the child's behavior as context-driven, rather than child-driven which would reduce the effect of the child's condition on parental expectations about his or her future behavior as long as the context is perceived as instable (White, 1995). Third, many parents tend to wish their children to do better than they have done themselves, which, in some cases, might increase the expectations as well (Asmußen, 2017).

While some studies have examined how the behaviors of the child (or their symptoms) influence the expectations of his or her parents (e.g., Almroth et al., 2019; Eisen et al., 2004; Ivey, 2004), there are also studies which looked at this topic from a different perspective, that is how parental expectations influence their child's behavior (e.g., Gurland & Grolnick, 2008; Ohene, 2006; Padilla-Walker & Carlo, 2007). As it is

assumed expectations and behavior are reciprocal, it is important to look at this topic from both sides.

To give a brief insight of how expectations can influence the behavior of the child, one can look at academic achievement, where there is, on average, a small effect of parental expectations on change in academic outcomes of the child over time (Pinquart & Ebeling, in press). The effect of parental expectations on child achievement is, in part, explained by parental expectations influencing the expectations of the student about their performance, their academic engagement and academic self-concept, as well as by parental achievement-supportive behaviors. Studies by Ohene (2006) and Padilla-Walker and Carlo (2007) indicate that the effects of parental expectations on the child's antisocial and prosocial behavior are mediated by the child's personal values.

Another example is peer relations, where parental expectations can influence the way children act towards others (Gurland, Grolnick, & Friendly, 2012). For example, Gurland and Grolnick (2008) found children like others more if they act the way their parents expected them to. This effect persists into adolescence, although with increasing age expectations of peers become more important (Wentzel, Russell, & Baker, 2016).

How well parents adapt their expectations in response to the behavior of their child may depend upon their dispositional flexibility. Originally, the concept of flexible goal adjustment was introduced by Brandtstädter (1989), who thought crises and critical life transitions would activate one of two mechanisms – tenacious goal pursuit and flexible goal adjustment. Brandtstädter and Renner (1990) found younger adults use more tenacious goal pursuit, while older adults use more flexible goal adjustment. In parents of early adolescents, both strategies – strengthening efforts to achieve ones' goals and

to make ones' expectations – are true (tenacity), and adjusting expectations to the current circumstances (flexibility) are likely equally present (Brandtstädter & Renner, 1990). Seltzer, Greenberg, Floyd, and Hong (2004) found that parents of children with a mental health problem reported higher well-being if they scored higher on flexible goal adjustment. Unfortunately, these authors did not test whether dispositional flexible goal adjustment relates to lower expectations concerning the behavior of the child which would be easier to fulfil and reduce the risk for disappointments.

As pointed out, up until now, there are not many studies researching the effect of mental disorders in children on the expectations of their parents. When the link between parental expectations and children's mental disorder is addressed, usually papers only deal with mental disorders and expectations about academic achievement, sometimes in combination with social or behavioral problems (Almroth et al., 2019; Ivey, 2004; Ohan et al., 2011). To our knowledge, there is no study yet examining the broad range of expectations in parents of children with mental disorders with regard to emotion regulation, peer relations, academic behavior, and social behavior. In addition, it has not yet been tested whether dispositional tenacity and flexibility affect parental expectations about the behavior of their children. This led to the following hypotheses that are examined in the present paper.

Hypotheses

- 1) Due to the fact that parents partially build their expectations on past experience and that they realize more problems if their child has a mental disorder compared to parents of healthy children, we expected to find lower expectations in parents of a child with a mental disorder.
- 2) In concordance with hypothesis 1, we assumed the higher the expression of symptoms, the lower the expectations of parents in the related area.

- 3) As we compared a sample of parents of healthy children and of children with a mental disorder, we expected differences regarding the actual behavior of the children, such as higher perceived levels of rule breaking behavior and social problems in children with mental disorders.
- 4) We assumed the effect of the mental disorder on parental expectations is mediated by the actual elevations of rule breaking behavior and social problems of the child.
- 5) As disorders refer to a specific pattern of behavior, we expected parents to lower their expectations mainly in areas typically affected by the mental disorder, but not in other areas of life of the child. Parents of children with externalizing disorders lower their expectations regarding anti-social behavior and peer relations, but not in other areas, while parents of children with internalizing disorders were expected to state lower expectations, mainly regarding the child's emotion regulation.
- 6) We expected parents of children with a mental disorder who have a higher score on dispositional flexibility to show lower expectations regarding the areas typically affected by the disorder of the child than parents with a low score on dispositional flexibility. This is, because those parents should be able to flexibly adjust their expectations to the perceived present behavior.
- 7) Similarly, we expected parents of children with a mental disorder who have a higher score on dispositional tenacity to show higher expectations regarding the areas typically affected by the disorder of the child than parents with a low score on tenacity. The reason behind this is that those parents should put more effort in fulfilling their expectations.

Methods

Participants

A total of 264 parents participated in the study. Great care was taken to maximize the comparability of the clinical sample and the control group. The clinical sample consisted of 50 parents (41 mothers and 9 fathers) who were recruited from two different sources. One third were parents recruited from different mental health centers (in Hessen, Germany). To participate in the study, the child had to be in the diagnostic phase or may have had a maximum of one month of therapy, so there were not yet any effects of treatment. Every child in the diagnostic phase was checked later whether they were diagnosed. Only parents of those with a mental disorder diagnosis were included in the present study, and the primary diagnosis was coded. This led to the exclusion of $n = 8$ parents whose child did not fulfill the criteria of a mental disorder. The other parents filled in the questionnaire online. Therefore, a number of websites regarding parenting and mental disorders were contacted, who subsequently published the participation link. Again, parents who did not report a psychiatric diagnosis of their child were excluded from the sample ($n = 6$). Both samples added up to $n = 23$ children with externalizing disorders (conduct disorder or ADHD) and $n = 21$ children with internalizing disorders (anxiety disorders, depression, or adjustment disorder). Six children did not fit in one of these categories, as autism and eating disorders were not assigned to one cluster as they were not deemed to fit well in either (Bauminger, Solomon, & Rogers, 2010; Mitchell, Wolf, Reardon, & Miller, 2014). Children were in 3rd to 8th grade. Their age varied from 9 to 15 years ($M = 11.8$; $SD = 2.13$). 20 children were female and 30 males. There was no significant difference between the online and the offline group regarding age or gender, or with regard to the parental expectations ($t = .12$ to 1.24 ; $df = 48$; $p > .05$).

The control group consisted of 214 parents (141 mothers and 28 fathers and 45 unknown) of adolescents from four schools in different parts of Germany including the four major German school-types (Haupt-, Real-, Gesamtschule, and Gymnasium) as well as from sport clubs. Children were in 3rd to 8th grade, and their age varied from 9 to 15 years ($M = 11.6$; $SD = 1.40$). In total, 91 were female and 123 male. Participation was voluntary, and parents recruited via schools got the questionnaire from their children, who received them at school and were asked to return them there. Parents recruited at sport clubs were asked to fill in the questionnaire on the spot. To have two completely distinguished groups regarding mental health, we calculated the problem scores from the Children Behavior Checklist (CBCL 6-18R; Achenbach, 2009) the parents filled in, and excluded those with scores higher than the cut-off values and those at risk of having a mental disorder ($n = 24$). The clinical and non-clinical sample did not differ significantly regarding age ($t = .84$; $df = 262$; $p = .42$) or gender ($t = .38$; $df = 262$; $p = .70$).

Measures

As we could not find validated measures of parental expectations about avoiding antisocial behavior, emotion regulation, and building peer relations, we adapted items from instruments that originally assessed the present state of these behaviors. We used four questionnaires as a basis for selecting and adapting items – the revised Children Behavior Checklist (CBCL 6-18R; Achenbach, 2009), the Strength and Difficulties Questionnaire (SDQ; Goodman, 1997), and the revised Self-Perception Profile for Adolescents (SPPA-R; Harter, 2012). For measuring the dispositional tenacity and flexibility of the parents, we used the Tenacity and Flexibility Short Scale (Ten-Flex-K; Huckert, 2011). All items were rated using a 5-point Likert-type scale ranging from 1 = *doesn't apply at all* to 5 = *totally applies*.

The measure of parental expectations had been pretested with a different sample of 202 German parents (Ebeling, 2016). The analysis in that study resulted in five factors addressing expectations regarding emotion regulation (7 items), academic achievement (4 items), avoidance of anti-social behavior (5 items), pro-social behavior (6 items), and peer relations (6 items). Sample items are as follows: “I expect my child to calm down quickly if he/she is excited” (emotion regulation), “I expect my child to have good or very good grades in mathematics” (academic achievement), “I expect my child to never steal or cheat” (avoidance of anti-social behavior), “I expect my child to be helpful if someone else is hurt, ill or sad” (pro-social behavior), and “I expect my child to know what to do in order to be part of a group” (peerrelations).

To assess the actual behavior of the children, we used the CBCL. This measure was standardly handed to the parents of children at mental health centers, easy to integrate in the questionnaire regarding expectations, and a reliable indicator for the present behavior, as it is perceived by the parents (Döpfner, Plück, & Kinnen, 2014).

Test of Measurement Invariance

When comparing two groups it is important to check for measurement invariance to make sure the findings can be compared meaningfully. There are different levels of measurement invariance: *configural measurement invariance* is the lowest level, and is met when the two groups show the same general factor, including the same general pattern of factor loadings and the same number of factors (Rudnev, Lytkina, Davidov, Schmidt, & Zic, 2018). The next level is the *metric invariance*, also called weak measurement invariance, which is achieved when the same factor loadings occur regarding all items in both groups. To test this, factor loadings are fixed to be equal across the groups and the model fit is tested via chi-square tests against the fit of the less restrictive model. *Scalar invariance* is the highest level of measurement. If this is

given, the same zero point and the same units can be found for the latent scales across both groups. To test this, the intercepts of the items have to be the same across the compared groups as well. Given scalar invariance, latent variables can be compared meaningfully (Vandenberg & Lance, 2000). As full scalar invariance is not found in most cases, researchers often tend to search for partial scalar invariance. This concept received much criticism, as it is a search based on trial and error. A newer alternative to evade this problem is the *multiple group factor analyses alignment* (Asparouhov & Muthén, 2014). This method got refined by Marsh et al. (2018) by restricting the means and the variances of the latent factor to 0 and 1, respectively.

In the present study, the assumed factor structure of the expectation questionnaire was confirmed in a confirmatory factor analysis (CFA) for both groups using AMOS Version 23 (Arbuckle, 2014). Chi-square tests were used to test for measurement invariance, comparing the results of both groups (Milfont & Fischer, 2011). After this procedure, single scale comparisons were computed, in which the regression weights were restricted to be equal in both groups. The last step towards completing the preconditions for meaningful mean comparisons was done by restraining the mean and the variance of the factors to 0 and 1.

It has been recommended to divide the chi-square score by the degrees of freedom and to use scores smaller than 2 for an optimal model. Still, there is literature identifying scores lower than 3 or 5 as indicators of adequate model fit (Kline, 1994; Schumacker & Lomax, 2004). Thus, the present observed scores of 0.13 to 2.75 can be interpreted as an acceptable fit of the configural invariance model (Table 1). The RMSEA being .08 or smaller indicates acceptable fit as well (Arbuckle & Wothke, 1999; Byrne, 2016; Byrne, Shavelson, & Muthen, 1989).

The analysis indicated metric invariance and invariance of the alignment method, which allows comparing means of the latent scales meaningfully, as it is unlikely to receive completely invariant scales, anyways.

[Include Table 1 about here]

In the current investigation, each factor was found to be internally consistent in both the clinical and the control samples (emotion regulation, $\alpha = .96/92$; pro-social behavior, $\alpha = .77/83$; anti-social behavior, $\alpha = .78/78$; peer relations, $\alpha = .89/82$; academic achievement, $\alpha = .89/93$).

Results

Starting with descriptive results, we found the expectations of parents in the clinical sample were medium, while those of the control group were medium to high, on average (Table 2). For parents of the clinical sample they ranged from 2.68 (emotion regulation) to 3.32 (pro-social behavior) and for the control group the range was 3.35 (achievement) to 4.08 (avoidance of anti-social behavior). The smallest between-group difference was found for expectations about academic achievement. The highest between-group difference was found regarding expectations for emotion regulation.

[Insert Table 2 about here]

In order to compare the expectations of the clinical and control sample, *t*-tests were calculated. Results were in favor of our first hypothesis as parental expectations were significantly lower in the clinical sample than in the control group. According to Cohen (1992), the size of between-group differences varied from a small-to-moderate effect size of $d = .48$ (expectations regarding school grades) and a large effect size of $d = 1.12$ (sum measure across the expectation domains) (Table 2).

In order to test the second hypothesis on associations between symptom levels with parental expectations, we used the CBCL scores as indicators for the severity of

the symptoms. We conducted the analysis only with the clinical sample, because we were interested in whether the symptom level explains variance of expectations within the clinical sample. Correlation analysis showed significantly negative correlations between the severity of externalizing problems and expectations in all assessed domains (emotion regulation: $r = -.56, p < .05$; peer relations: $r = -.57, p < .05$; academic achievement: $r = -.72, p < .01$; pro-social behavior: $r = -.79, p < .01$) except for expectations regarding anti-social behavior ($r = -.30, p = .24$). For the severity of internalizing problems, no significant correlations were found. This means hypothesis 2 was only supported for the level of externalizing symptoms.

Knowing that expectations differ between the clinical sample and the healthy control group, we also tested whether there are differences between the reported behaviors of the children (hypothesis 3). We ran *t*-tests comparing the scores of the CBCL scale for social problems, as well as for anti-social behavior. Both scales differed significantly between the two groups (social problems: $t = 2.55, df = 183, p < .05$; anti-social behavior: $t = 12.62, df = 183, p < .001$) with the clinical sample showing more problems.

We used this result as the basis for testing hypothesis four, that between-group differences in parental expectations are mediated by the differences in the present behavior shown by the children. We could only test this for the effect of social problems on expectations about peer relations and the effect of rule breaking on expectations about anti-social behavior, as we had no valid indicators of the child's present emotion regulation and academic achievement. As shown in Figure 1, we found present social problems had a marginally significant mediation effect on the association of group membership with parental expectations about peer-relations. There was no significant mediating effect of the present level of rule breaking behavior on the association of

group membership with parental expectations about anti-social behavior. Thus, the fourth hypothesis was only weakly supported.

[Insert Figure 1 about here]

To test hypothesis five, that expectations are lowered mainly in the areas affected by the disorder, we combined the different disorders into internalizing and externalizing disorders, as the sample sizes for specific disorders were too low for calculating disorder-specific results. Still the subsamples for this test were quite small ($n = 23$ for externalizing disorders (conduct disorder and ADHD) and $n = 21$ for internalizing disorders (including anxiety disorders, depression, and adjustment disorder)). *T*-tests showed that parents of children with externalizing disorders had significantly lower expectations than parents of healthy children in every assessed scale, even after adjusting the alpha-error for multiple testing, (Table 3). Testing parents of children with internalizing disorders and parents of healthy children, all scales but expectations regarding grades showed significant between-group differences. This indicates the adaptation of expectations is not disorder-specific but seems to be a general effect. We also looked at the differences between internalizing and externalizing disorder. The only significant differences we found here were regarding expectations about peer relations and pro-social behavior with parents of children with externalizing disorders having lower expectations (Table 3). As we didn't find any significant differences between parents of children with externalizing versus internalizing disorders regarding expected anti-social behavior, we explored whether such a difference may appear when comparing parents of children with conduct disorders (who typically show elevated externalizing behaviors) and those with internalizing disorders, but this difference was only descriptive, as the sub-samples were too small for statistical tests. Looking at the results, we found larger differences between the parents of children with

conduct disorder and the parents of children with internalizing disorders than between parents of children with ADHD and parents of children with internalizing disorders.

[Insert Table 3 about here]

For testing the sixth and seventh hypotheses on dispositional flexibility and tenacity, we calculated multiple regression analysis with flexibility and tenacity as predictors of the different expectation indicators, as both dispositional variables were positively correlated ($r = .52, p < .001$). The hypotheses could only be tested for the clinical sample, as we had no data for tenacity and flexibility in the control group. We found significant associations of flexibility and expectations regarding pro-social behavior ($b = .35, t = 2.48, p < .05$) and peer relations ($b = .44, t = 3.31, p < .01$). These results were opposite to our hypothesis because higher flexibility went along with higher expectations.

In line with the sixth hypothesis, we found an association of tenacity and expectations about grades ($b = .42, t = 2.87, p < .01$), pro-social behavior ($b = .29, t = 2.02, p < .05$), and avoidance of anti-social behavior ($b = .54, t = 3.71, p < .001$). Associations with expectations about emotion regulation ($b = .27, t = 1.72, p = .10$), and peer relations ($b = .26, t = 1.92, p = .06$) went in the same direction, but were not significant. These findings support the hypothesis that parents with higher tenacity are less likely have low expectations.

Discussion

We found that the expectations of parents of children with a mental disorder tended to be moderate, while expectations in the control group were rather high. We found expectations of parents of a child with an externalizing disorder to be even lower than expectations of parents of a child with internalizing disorders. We also found an

association between tenacity and flexibility, with the level of expectations reported by the parents.

The first hypothesis, that parental expectations are lower in the clinical sample than in the control group, proved to be true in each of the assessed domains. This is not astonishing, as other researchers already found that expectations are partially based on prior experiences (Rief et al., 2015; Swider & Babel, 2013). Parents of children with a mental disorder likely experience poor behavior displayed by their children in some areas (NIMH, 2019), which can result in lowering parental expectations. This would mean their expectations are reflections of their past experience. Another possible explanation might simply be that the therapist told the parents they should not have too high expectations if their child has a certain disorder (Fristad, Goldberg-Arnold, & Gavazzi, 2003).

The second hypothesis, that the actual behavior of the children differs between the clinical and the control group, was supported by the data. This is not surprising, as atypical behavior is usually the reason somebody realizes the need to seek mental health services (Ogundele, 2018).

Although the first and second hypotheses were supported, we did not find that the present level of antisocial behavior mediated the effect of membership of the clinical versus nonclinical group on the level of parental expectations. In contrast, the level of present peer problems turned out to mediate the effect of group membership on parental expectations. This leaves the question open, why do parents still lower their expectations in every assessed domain, if it is not (only) because of the observed behavior. One reason for this could simply be sample size, as the clinical samples were small. For antisocial behavior, another problem might be the only partial overlap between the assessed behavior via CBCL and the assessed expectation scale created

from various questionnaires. Mediation effects might be found when using exactly parallel items on present states and future expectations. Additionally, the so-called halo effect might play a role (Kahneman, 2011). This effect describes how a certain feature of a person is so strong, that all other features are interpreted in the light of this. In the case of parents of children with a mental disorder it could mean parents realize an undesired behavior as very strong and this behavior then influences the perception of the child in other domains as well. Another possibility is the already described labeling bias (Stinnett et al., 2001), stating parents lower their expectations because they are told something is not normal with their child. Obviously, there are other possibilities like the disorder displaying in a way relevant to parental expectations, but not assessed via the CBCL or being underrepresented there. An example would be disobedience, which is assessed in the CBCL only with one item for the home environment, but is probably one of the most present and annoying behaviors for the parents to be exposed to.

Another interesting finding refers to the fourth hypothesis, stating parents lower their expectations mainly in the domains related to the disorder of their child, which was not proven true, as parents lowered their expectations in every assessed domain. This is rather interesting as we assumed that especially expectations regarding anti-social behavior would be lowered in parents of children with externalizing disorders, as this behavior is part of the diagnostic criteria for some externalizing disorders (WHO, 2004). However, the group with externalizing disorders included a number of children with ADHD rather than conduct disorders, and the assessed forms of anti-social behavior, such as stealing or lying, are not typical symptoms in young people with ADHD (WHO, 2004). Looking at the subgroups exploratively, we found parents of children with conduct disorder lowered their expectations regarding anti-social

behavior more than parents of children with ADHD, but the sub-samples were too small for identifying reliable between-group differences. Disorders affect multiple areas of life, and disorder-specific differences are likely only gradual and therefore only significant in large samples. Another reason why parents lowered their expectations in every scale, might again be the so-called halo effect (Kahneman, 2011).

We found weaker associations between internalizing disorders and parental expectations than between externalizing disorders and parental expectations. To some extent, our finding is in line with Almroth et al. (2019), who found weaker associations between internalizing problems and outcome variables, as compared to externalizing problems. We have to bear in mind that problems with emotion regulation tend to be situation-specific in persons with most anxiety disorders (phobias), which made up about half of our sample. Here, parents do not need to lower their expectations about emotion regulation in other contexts that are not affected by the disorder. As parents of children with internalizing disorders tended to have lower expectations than parents of healthy children in almost all assessed fields, we have to be aware that internalizing disorders also affect different aspects of life. For example, although phobias are specific, there is a phobia directly affecting success at school (school phobia) and peer relations (social phobia) (APA, 2013).

The findings for the fifth hypothesis, that stronger symptoms go along with lower expectations, was supported only for externalizing problems. A possible explanation might be that externalizing disorders affect mainly others (APA, 2013), so parents probably realize the level of the undesired behavior quite clearly, while internalizing problem behavior instead affects oneself (APA, 2013). In this way, it is potentially not as obvious to the parents how strongly the problem behavior of the child affects other aspects of their life, apart from the disorder, if they have an internalizing disorder.

Quite surprising was the finding that parents who showed a higher level of flexibility also had higher expectations regarding pro-social behavior and peer relations for their children, which contradicted hypothesis six. As the flexibility scale assessed dispositional flexibility of goal adjustment rather than the dispositional flexibility of one's expectations (Brandtstädter & Renner, 1990), it may not have been specific enough in predicting a higher willingness to adjust one's expectations. Alternatively, dispositional flexibility may work in a different way, namely by expecting the child will behave in a flexible way and may improve their behavior, so there would be no need for lowering parental expectations. This assumption would be in line with the observed positive association of flexibility with the level of parental expectations.

The seventh hypothesis, that parents who scored higher on tenacity also had higher expectations for their children, turned out to be true. This is in line with our thoughts that tenacious parents cling to their high expectations, regardless of the problems their child shows, as this is what tenacity is about (Brandtstädter & Renner, 1990). Maybe parents with higher tenacity utilize their own behavior to push their child to their best, so for them it might just be promising to have rather high expectations.

Overall, parents do lower their expectations to a certain extent if the child has a mental disorder. Some factors, like the child having an externalizing disorder, lead to adaptations of parental expectations, while others, like high tenacity or flexibility of the parent slow down expectation change. Those factors might be taken into consideration for therapists who work with parents of children with mental disorders, because they have the potential to individualize parent training in a way the child and the parents benefit most. Therefore, therapists could emphasize on the psycho-education and make it clear to the parents that not every aspect of a child's life has to be affected by the disorder (APA, 2013). This could help, at least in the academic domain, as we know

child achievement benefits from realistically high parental expectations (Pinquart & Ebeling, in press; Yamamoto & Holloway, 2010). This might also work in other domains, given what we know about the associations between parental expectations and social behavior (Gurland & Grolnick, 2008; Groland, Grolnick, & Friendly, 2012). This could also be an important thing to know when working with parents because it could help to explain in which areas a child will probably make the most progress during therapy and that parents should have high expectations here to support a child's development.

Limitations

Firstly, we have to point out the relatively small sample size of parents of children with a mental disorder. This further led to limited statistical power in the analyses of expectations of parents of children with externalizing versus internalizing disorders or symptoms. The small sample size also made it impossible to test for associations of expectations with individual disorders, like social anxiety, which might affect peer problems more, while school phobia might have a larger effect on academic expectations. Secondly, as it is often the case in research on parenting, fathers were underrepresented among our respondents. Thirdly, parents filled in the questionnaire at home, so there was no control over whether they filled it in alone or whether they talked to their children or partner before answering our questions. Finally, a number of parents filled in the online questionnaire, so we do not know whether they fully concentrated on filling it in, or whether they did something simultaneously.

Future Directions

Future research should test whether our results can be replicated in larger samples, in which associations of specific expectations related to specific disorders can also be tested. It would also be interesting to find out why tenacity and flexibility

had similar effects on the adjustment of parental expectations. This leads to the question, whether a specific measure for dispositional flexibility and tenacity of expectations is needed. Another interesting idea could be to research whether more flexible parents expect their children to change their behavior quicker than parents with low flexibility do. Future research could also broaden the range of assessed parental expectations (e.g. by including expectations about autonomy). It would be very interesting to include healthy siblings to check whether parental expectations differentiate between their children if one of them has a mental disorder. Finally, it would also be interesting to do a longitudinal study and check how the expectations of the parents change in relation to the behavior of the children.

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Table 1: Test for Measurement Invariance between the clinical and control group

Domain	$\chi^2 (df)$	χ^2 / df	$\Delta\chi^2 (df)$	CFI	RMSEA
Emotion regulation					
Configural invariance	43.20 (28)	1.54	-	.99	.05
Metric invariance	46.57 (34)	1.37	3.37 (6)	.98	.04
Scalar invariance	50.27 (36)	1.40	3.70 (2)	.98	.04
Grades					
Configural invariance	0.54 (4)	0.13	-	.99	.00
Metric invariance	2.05 (7)	0.29	1.51 (3)	.99	.00
Scalar invariance	6.18 (9)	0.69	4.13 (2)	.99	.00
Anti-social Behavior					
Configural invariance	2.32 (4)	0.58	-	.99	.00
Metric invariance	4.95 (7)	0.71	2.63 (3)	.98	.00
Scalar invariance	9.07 (9)	1.01	4.12 (2)	.99	.00
Pro-social Behavior					
Configural invariance	45.60 (18)	2.53	-	.94	.08
Metric invariance	54.06 (23)	2.35	8.46 (5)	.94	.07
Scalar invariance	59.73 (25)	2.39	5.67 (2)	.94	.07
Peer Relations					
Configural invariance	49.47 (18)	2.75	-	.94	.08
Metric invariance	59.19 (23)	2.46	9.72 (5)	.93	.08
Scalar invariance	61.78 (25)	2.47	2.66 (2)	.93	.07

Note: CFI = comparative-fit-index; RMSEA = root-mean-square-error-of-approximation;

Table 2: Means, Standard Deviation and Effect size of the Five Assessed Scales for the Clinical and Control Group

Domain	Mean		SD		Cohen's <i>d</i>		<i>T</i> (df = 262)
	Clinic	Control	Clinic	Control	Clinic	Control	
Emotion Regulation	2.68	3.57	1.09	.77	.94	.94	6.72 ***
Grades	2.90	3.35	.95	.92	.48	.48	3.12 **
Anti-social Behavior	3.30	4.08	.80	.74	1.01	1.01	6.62 ***
Pro-social Behavior	3.99	3.98	.65	.64	.98	.98	6.43 ***
Peer Relations	3.32	3.97	.70	.59	1.00	1.00	7.20 ***

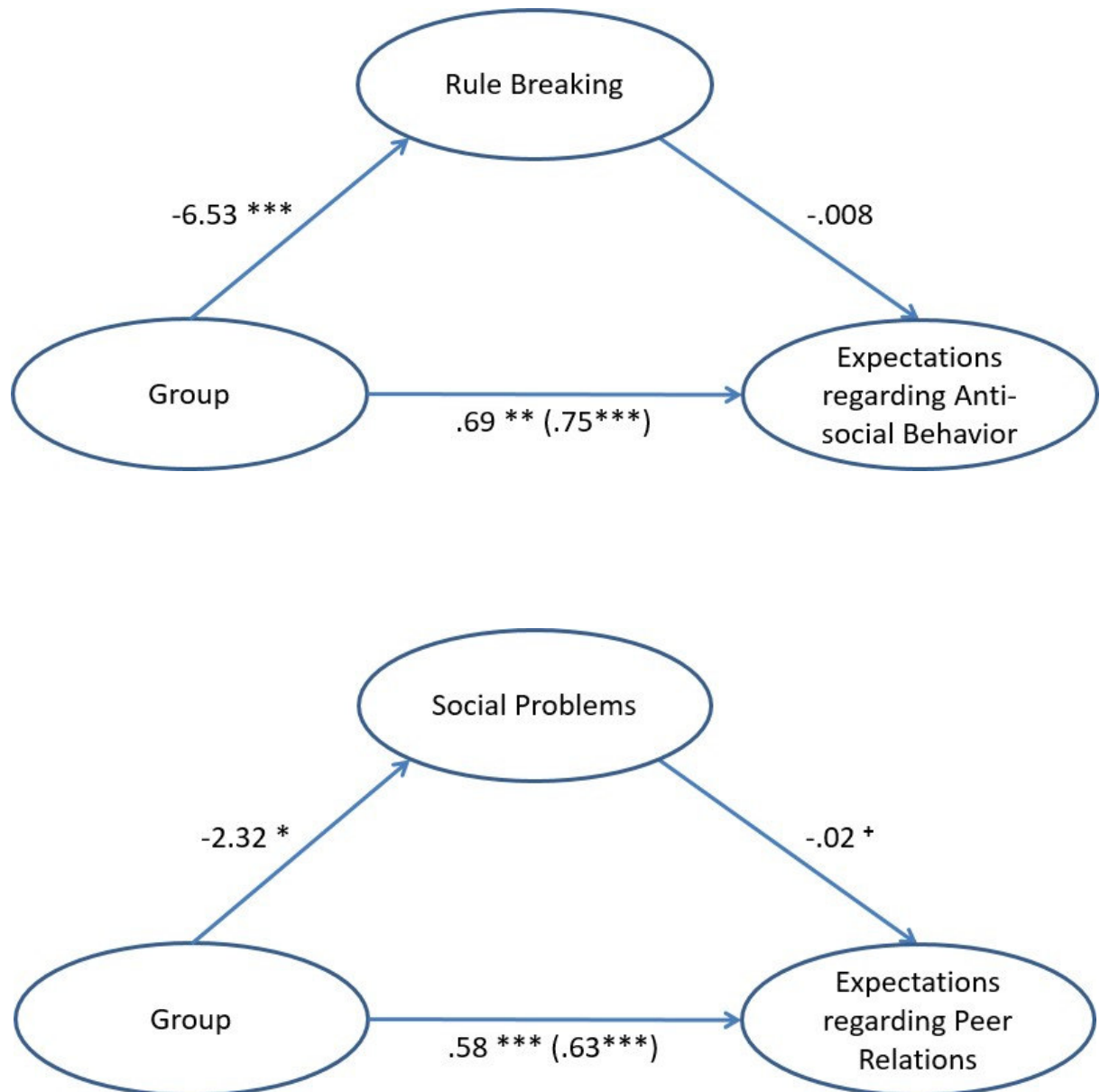
Note: ** $p < .01$; *** $p < .001$

Table 3: Means, Standard Deviation and Effect Size of the Five Assessed Scales for the Control and Parents of Children with Internalizing and Externalizing Disorders

Domain	Mean		SD		Mean		SD		Internalizing vs. externalizing disorders		Internalizing disorders vs. control group		Externalizing disorders vs. control group	
	Internal	External	Internal	External	Control	External	Control	External	Cohen's <i>d</i>	<i>t</i> (df = 42)	Cohen's <i>d</i>	<i>t</i> (df = 233)	Cohen's <i>d</i>	<i>t</i> (df = 235)
Emotion Regulation	3.01	2.73	1.15	.92	3.57	.77	.27	.87	.57	3.04 **	.99	4.85 ***	.99	4.85 ***
Grades	3.06	2.68	1.01	1.00	3.35	.92	.38	1.24	.30	1.36	.70	3.27 **	.70	3.27 **
Anti-social Behavior	3.27	3.48	1.05	.52	4.08	.74	.25	.87	.89	4.60 ***	.94	3.77 ***	.94	3.77 ***
Pro-social Behavior	3.68	3.22	.75	.48	3.98	.64	.73	2.45 *	.43	2.05 *	1.34	5.57 ***	1.34	5.57 ***
Peer Relations	3.60	3.15	.78	.69	3.97	.59	.61	2.02 *	.54	2.69 **	1.28	6.28 ***	1.28	6.28 ***

Note. * $p < .05$; ** $p < .01$; *** $p < .001$

Figure 1 – Mediation of Present Behavior on the Association of Group Membership with Parental Expectations



Note: $^+ p < .1$; $^* p < .05$; $^{**} p < .01$; $^{***} p < .001$; () bidirectional associations; unstandardized coefficients

7.2 Curriculum Vitae

7.3 Erklärung

Ich versichere, dass ich meine Dissertation

Parental Expectations –

Intercultural Perspectives and Parents of Children with a Mental Disorder

selbständig und ohne unerlaubte Hilfe angefertigt und mich dabei keiner anderen als der von mir ausdrücklich bezeichneten Quellen und Hilfen bedient habe. Die Dissertation wurde in der jetzigen oder einer ähnlichen Form noch bei keiner anderen Hochschule eingereicht und hat noch keinen sonstigen Prüfungszwecken gedient.

Marburg, 01. April 2020

Markus Ebeling