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## **Psychosocial development and the development of problem behaviour during adolescence**

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## 6 General Discussion

This dissertation examined how, and to what extent, psychosocial maturity, or psychosocial development, relates to problem behaviour over and above other, criminological relevant factors. To obtain an answer to this question, self-report data on problem behaviour and criminological factors was collected, and a psychological instrument was used to obtain information on (the level of) psychosocial development. Data were collected in 12 schools, during class, in two waves with a two-year interval. In total, data was gathered from 811 adolescents. A total of 539 adolescents from the first wave were retrieved in the second year.

The first chapter described the theoretical background as well as the relevance of the topic at hand. The second and third chapter focussed on the *cross-sectional* effects on problem behaviour of the various levels of psychosocial development. In the second chapter a study is described that studied the relation between various types of problem behaviour and level of psychosocial development. The study in the third chapter investigated mainly the effect of the Impulsive (E2) and Self-protective (E3) level of psychosocial development and the effect of self-control on problem behaviour. Chapter four and five aimed at studying the *longitudinal* effect of psychosocial development on the level and development of problem behaviour. The fourth chapter related paths of psychosocial development to the level and development of problem behaviour. The fifth chapter addressed the added value of psychosocial development next to parental behaviour and peer factors in explaining delinquency.

In the following sections the results of the four empirical chapters will be summarised. Following this, the results are discussed from a general perspective, more specifically from a psychological and criminological perspective. Furthermore, policy implications are discussed. Lastly, this chapter describes the limitations as well as future research directions.

### 6.1 Summary

Chapter one described several theoretical perspectives relevant to the question how psychosocial development relates to problem behaviour. Above all, the background of this thesis is subject to both criminological and psychological perspectives. From a criminological perspective it was argued that the use of a stage-theory could be helpful in contributing to the understanding of development of problem behaviour prevalence. More specifically, from a criminological point of view Loevinger's stage-theory could help examine the precise path of development and the differences between those adolescents who temporarily show mild offending behaviour and those adolescents who persist in delinquent behaviour. Subsequently, it was suggested that the normative development might relate to normative, mild problem behaviour that desists over time.

In chapter two the cross-sectional relation between the levels of psychosocial development and various forms of problem behaviour was examined. Two hypotheses were tested. The first hypothesis concentrated on stagnation of psychosocial development.

Adolescents who stagnated in their psychosocial development were in this study defined as being at a psychosocial level that was lower than the normative level for their particular age-cohort. From this “Stagnation hypothesis” it was expected that these adolescents show more serious problem behaviour than the adolescents at a normative psychosocial level or at a precocious level. The second hypothesis was the “Normative hypothesis”. This hypothesis suggested that the adolescents in a normative psychosocial level do misbehave but far less and also less severely than the adolescents stagnating in their psychosocial development. The study used not only the total scales of misbehaviour and delinquency but also the separate items. This created the opportunity to investigate possible typologies and severity scales.

Regarding the results, a relation was found between adolescents present in the Self-protective level and prevalence of different types of misbehaviour in school and outside school (e.g., mild delinquency). Adolescents with a psychosocial development below the Self-protective level (E3), and thus stagnating in their psychosocial development, had a 1.5 to 4-fold increased risk of committing aggressive misconducts and offences. In sum, the two hypotheses were partly supported. First, the results revealed a significant relation between normative levels of psychosocial development and mild misbehaviour, which supported the “Normative hypothesis”. Second, a non-significant trend was found between the Impulsive level (E2) and serious and violent delinquency. Therefore, the hypothesis for a stagnating development and serious delinquency received weak support. Surprisingly, the results revealed a third result coming forth out of the analysis. A clear distinction in problem behaviour prevalence could be made in relatively low and relatively high psychosocial developmental stages. Adolescents in the lower levels of psychosocial development were significantly more problematic than adolescents in the normative or higher levels of psychosocial development. As such, this study showed the first signs for the possible protective effect that higher levels of psychosocial development may have in avoiding problem behaviour.

The second study focussed again on the cross-sectional analysis of levels of psychosocial development and problem behaviour. In addition, this study included level of self-control as a criminological factor in order to investigate the unique explaining variance. This level of self-control was measured through a total scale, but could also be divided into three subscales: “Impulsivity”, “Adventure-seeking” and “Temper”. The study had multiple hypotheses. The first hypothesis concentrated on the relation between low self-control and problem behaviour. The second hypothesis focussed on testing the earlier mentioned “Normative hypothesis” with problem behaviour controlled. The third hypothesis focussed on testing the “Stagnation hypothesis” with subscales of problem behaviour. The fourth hypothesis aimed at relating the self-control dimension with lower levels of psychosocial development. The fifth, main hypothesis was to investigate the relation between psychosocial development and problem behaviour, next to low self-control.

Regarding the first hypothesis, earlier results on low self-control related to problem behaviour were replicated. There were significant relations between problem behaviour and high impulsivity, high adventure seeking and high temper, and in total, significant relations with low self-control. With respect to the second hypothesis, the results revealed a clear significant effect of the normative psychosocial level on moderate misbehaviour. With respect to the third hypothesis, the “Stagnation hypothesis”, no relation was found between stagnated development and problem behaviour. Regarding the fourth hypoth-

esis on the normative development clear relations were found between low self-control and the Impulsive and Self-protective level. Surprisingly, no clear relation was found between the sub dimension Impulsivity of low self-control and the Impulsive level of psychosocial development. Most likely impulsive behaviour was not defined in the same way for psychosocial development as it was for low self-control. Regarding the fifth and final hypothesis on the effect of levels of psychosocial development over and above the effect of low self-control, results partially supported the hypothesis. That is, an effect over and above the effect of low self-control was found for moderate misbehaviour. Thus, psychosocial development partly explained the prevalence of moderate misbehaviour, over and above the effect of low self-control. This indicated a possible dynamic influence next to stable risk factors on the problematic behaviour.

To what extent does psychosocial development relate to the development of problem behaviour over and above other criminological factors? This was the main question to be answered in the fourth chapter. This study tried to contribute to the answer of this question by testing the effect of paths of problem behaviour with prevalence rates of problem behaviour over time. As such, we traded the “Stagnation hypothesis” for the “Stagnating path hypothesis” and the “Normative hypothesis” for the “Normative path hypothesis”. We also added three other theoretically relevant paths, inspired by the earlier research of Hauser and colleagues (Hauser, Borman, Powers, Jacobson, & Noam, 1990; Hauser, Powers, & Noam, 1991), and Hennighausen, Hauser, Billings, Schultz, and Allen (2004). These were the “lagging behind path”, “regressing path” and “precocious path”. Especially the latter was considered to be relevant, because we discovered a relation in the second chapter between precocious development and lower prevalence of psychosocial development. We hypothesised that the adolescents in the normative path would show mild misbehaviour and which would gradually increase in severity to more moderate problem behaviour. Our second expectation was that adolescents stagnating in their psychosocial development would show rather severe problem behaviour, which would increase to delinquent behaviour. Furthermore, we expected a protective effect of the precocious path of psychosocial development. The fourth and fifth hypotheses were aimed at the regressing path and the lagging behind path. Both types of psychosocial paths were expected to relate to a strong increase in severe problem behaviour.

The results showed that adolescents in non-normative developmental pathways (i.e., a lagging behind, stagnating, and regressing pathway) were more involved in problem behaviour at Wave 2 than adolescents with a normative or precocious psychosocial development. Also, a pre-normative psychosocial maturity related significantly to problem behaviour development. A decrease in problem behaviour was found for adolescents with a normative psychosocial development. Adolescents with a lagging psychosocial development were characterised by an increase in more severe problem behaviour. Such a change was not apparent in the stagnating path of psychosocial development. Here, no significant results were revealed regarding an increase in serious problem behaviour. The results showed that a protective effect on problem behaviour through a precocious development was clearly present.

The final study in this dissertation was also longitudinal and addressed the supplemental contribution of psychosocial development to problem behaviour, beyond parental factors and peer factors. The first hypothesis concerned the effects of the level of psychosocial development on problem behaviour: lower levels were expected to be associated

with more problem behaviour; higher levels of psychosocial development were expected to relate with less problem behaviour. The second expectation concerned additive effects of psychosocial development on problem behaviour beyond the effects of peer influence and parent behaviour. The third hypothesis focussed on the protective effect of rapid development. It was expected that a precocious development is protective and observed in the female sample, due to the fact that during early to mid adolescence females are more advanced in their psychosocial development.

The first hypothesis was supported and revealed a clear distinction between lower levels of psychosocial development and higher levels of psychosocial development in relation to problem behaviour. Lower levels related to higher problem behaviour prevalence, whereas higher levels of psychosocial development related to lower problem behaviour prevalence. These differences were not observed when the analysis was conducted separately for males and females. Regarding the second hypothesis no support was found. The results revealed that underdeveloped paths of psychosocial development did not account for the explanation of problem behaviour over and above the effect of negative peer influences or deprived parental relations. In other words, the effect of an underdeveloped psychosocial development (including the lagging behind, stagnating, and regressing path) on problem behaviour beyond environmental factors was not found. The third expectation testing a possible protective influence of a precocious psychosocial development was supported. The Precocious path of psychosocial development had a selective protective effect on problem behaviour. Selective, while it only occurred in misbehaviour and within the female sample. Thus, it can be summarised that a precocious psychosocial development protects the female adolescent from getting involved in delinquency.

## 6.2 Problem behaviour and the adolescents' developing maturity

Adolescents can be described as individuals in the phase of their life where most dimensions in life undergo great change and upheavals. For instance, on the dimension of pubertal development, during late childhood and adolescence, boys and girls undergo great physical changes. These changes often result in insecurity and accompanying stress. Next to, and interacting with, physical changes, the adolescent experiences psychological changes. The physical growing of the body costs a great deal of energy. At the same time changes occur in the sleep/wake cycle, indicating for the adolescent that they need less sleep. As such, there is incongruence in need of rest and receiving rest, resulting in stress. This change can explain for a great deal the, for parents annoying, tendency of laziness and lack of interest. On a psychosocial level, one can observe that the foremost thing adolescents do is take care of them-selves. As such, the outer world observes in the adolescent an egocentric, distant and lazy nature. Also, from a social environmental perspective a huge transition is experienced. Adolescents change from primary school to secondary school, resulting in quite some distress and tension regarding peer relations. Subsequently they experience an inner tension of balancing the amount of time spent with peers next to time spent with their parents, who always had a unique position in the life of their offspring. This results in tension with the caregivers (Westenberg, 2008). But do these pubertal changes also account for the fact that adolescents misbehave? Maybe, and if so only partially as pubertal changes alone and associated developments

in hormone cycles with subsequent mood changes, can not alone account for the steep increase in problem behaviour. Next to pubertal development, the development of becoming psychologically mature may play a role in problem behaviour. Regarding the developing psychosocial maturity several arguments can be given for the possible relation with problem behaviour.

### 6.3 Psychological implications

The consistent opinion on adolescents is that they lose track of what is normal and what not. According to this study, this assumption seems far from the truth. Only a small percentage of adolescents behave seriously problematically and an even smaller percentage behaves delinquently. However, most adolescents do indeed exhibit some form of misbehaviour in this particular period.

This paragraph addresses the psychological implications of the results of this dissertation. As such, it aims to translate the results to relevant aspects for contemporary psychology. Most likely the most important conclusion is that the misbehaviour of most adolescents does not have to be considered problematic or worrisome. Early adolescence is a period of huge transitions where compensations are needed to “survive” in the many new interactions with others and the Self. Research has indeed shown that also after the adolescent has his physical (pubertal) development finished, cognitive and psychosocial development continues until the age of 24 approximately. As such, some turbulence in adolescent behaviour appears almost unavoidable. When the relation between psychosocial development and misbehaviour is examined in more detail, it can be seen that it is the Self-protective level of psychosocial maturity that relates to milder problem behaviour: at the time our adolescents were tested, the Self-protective level was relatively normative for the adolescents’ psychosocial development. This does not imply that correction of unacceptable behaviour should not be carried out. On the contrary, parents and authorities should be aware of challenges and problems adolescents face in their life and assist their offspring, through correction, in progressing toward a mature level.

A second implication is that, while the theory we used is essentially meant for the study of normative psychosocial development, with current thesis, evidence is also found that a contributing value exists of the theory of psychosocial development in the explanation of non-normative, problematic behaviour. This was already previously shown through the studies of Frank and Quinlan (1976) and Krettenauer et al. (2003), where levels of psychosocial development related to problem behaviour. However, with the current study, developmental paths are identified in relation to normative problem behaviour as well as non-normative problem behaviour. This shows that a developmental perspective helps to distinguish normative misbehaviour from non-normative misbehaviour.

A third implication is the contributing value of the use of paths in analysing psychosocial maturity. From the fourth and fifth chapter it can be seen that the normative path relates to a small increase in frequency and severity of misbehaviour. Adolescents who lag behind in their psychosocial development show an increase in more serious problem behaviour. These findings show that, over time, normative psychosocial development relates to an increase in misbehaviour.

A final implication that follows from the results is that psychosocial development can also be interpreted as a protective factor for problem behaviour. From the second and fourth chapter it can be seen that levels of psychosocial maturity higher than normative, act as a protective factor for problem behaviour. Results from the fifth chapter show that a precocious psychosocial development protects girls from problem behaviour. These girls show less problem behaviour than normatively developing girls and under developing girls. This insight addresses maturation development in two ways. First of all, the precocious girls differ in psychosocial maturity from the main group. They have, on the one hand, a more elaborate technique of reflecting to themselves, and to their environment. Furthermore, they tolerate other opinions, and connect moral judgments to interactions with others. Although their stage characteristics prevent them from behaving problematic or delinquent, their differing maturation levels could on the other hand predict possible internalising problems, such as anxiety problems and depression. Because a minority of girls develop precociously, chances are increased that social isolation and lack of acceptance is experienced. Several studies already revealed relations between internalising problems and the Self-awareness level, the level considered in this study as precocious (Borst & Noam, 1993; Rierdan, 1998).

#### 6.4 Criminological implications

The previous paragraph tried to address the psychological implications. The current paragraph focuses on the implications this dissertation has for criminology. First, the theory of psychosocial maturity offers new possibilities to explain problem behaviour. The empirical studies in this dissertation, however, also showed that the relation so far is modest, although a unique contribution is seen of (level of) normative psychosocial development on mild problem behaviour, over existing criminologically “tested” factors. As such, adolescent psychological development seems to play a role in problematic behavioural output.

A second important implication is the use of a “stage-theory methodology” in this study. In the introduction a short description was given of criminological theories and their approaches. As far as developmental criminology is concerned, their theories can be divided into three characterizing groups. General static theories ascribe individual underlying differences in participation of crime. These differences are found in static components focussing on underlying factors that are seen as fairly stable after a short period. For instance, Gottfredson and Hirschi viewed low self-control as the criminal propensity for committing crime. The level of low self-control is determined rather early in childhood (Gottfredson & Hirschi, 1990). Wilson and Herrnstein also hold a static perspective. They theorised that criminal behaviour is mainly the effect of high impulsivity and impaired conscience (Wilson & Herrnstein, 1985). The second type is a general dynamic perspective. General dynamic theories focus on the role of the individual’s varying social circumstances or dynamic factors in life (e.g. marriage, job-continuity, becoming a parent: Laub & Sampson, 2003, and delinquent peer interactions: Warr, 1998). The third type is the typological perspective (Moffitt, 1993; Patterson & Yoerger, 1993). This type of theory states that the prevalence and development of criminal behaviour varies between

qualitatively different developmental trajectories, each having their own influencing characteristics. These influences are individual as well as environmental. Developmental theories of crime propose factors influencing delinquent development. However, such factors are at times so abstract as to be of little practical value. For instance, in Moffitt's taxonomic model (1993), the "how, when and what" of the particular development of contributing factors such as the "maturity gap" is hardly operationalised. Recapitulating from the introduction, Moffitt described that most adolescents can be found in the "adolescence limited group"; adolescents increase in rather mild to moderate problem behaviour, and this deviant behaviour desists gradually around mid to late adolescence. A second group is defined as the "life-course persisters", a small group of adolescents committing rather serious offences. The typology created by Moffitt is for a great deal differentiated by a phenomenon called the "maturity gap": The adolescents regard themselves as adult, while the (adult) environments do not respond to them as such.

The aim of this thesis was not to test the presence of the "maturity gap" phenomenon. However, our studies can possibly *contribute* to the explanation of crime development as an alternative explanation, next to this "maturity gap" phenomenon. The results showed that the theory of psychosocial development could be of additional or alternative value to the explanation of "adolescent-limited" offenders and "life-course persistent" offenders. Additional, because the "adolescent-limited" offenders resemble some of the characteristics of adolescents who have a normative psychosocial development with normative problem behaviour, that desists over time. The "life-course persistent" offenders resemble more the adolescents who stagnate and lag behind in psychosocial development. The psychosocial levels where stagnation takes place, and are most prevalent with problem behaviour, are characterised by a lacking impulse control, an egocentric attitude, a mental state of invulnerability, and hedonistic and provocative features. These characteristics are, unlike the concept of the maturity gap, more capable of being measured.

A third implication is that a stage theory as used in this thesis offers an opportunity to view individual development. Although the dynamic and typological theories use in a sense respectively a first- and second-order<sup>1</sup> perspective on development of crime, they are both not able to view deviant psychological, behavioural or, relevant to current study, criminal states, *independent* of general individual development. Dynamic and typological studies cannot theoretically differentiate over time whether development is deviant. Using a dynamic stage-theory, development is viewed separately from the occurrence of (psychological) deviance and, is evaluated in its own chronological relevance. As such, the theory of psychosocial development can be interpreted as dynamic and typological and the same time, so that relation can be made between problem behaviour and psychosocial maturity (Westenberg et al., 2000). The studies described in this dissertation showed the value of stage-theories. The study described in the second chapter revealed the precise differences in problem behaviour by relating certain items to levels of psy-

<sup>1</sup> First-order is a direct developmental approach. Second-order is creating typologies first and from there on evaluate them as different (dynamic) trajectories.



chosocial maturity. Furthermore, the third chapter showed the additional knowledge gained by relating criminogenic factors with the Impulsive and Self-protective level.

Stage-theories also offer solutions by creating paths between qualitatively different levels of psychosocial maturity. The studies in the fourth and fifth chapter illustrated paths of psychosocial maturity from one qualitatively different level to the next. As such the path is theoretically based between two evidence-based levels of psychosocial development. With the *Borderline* levels (psychosocial measurement by using half levels), it is possible to get a more detailed perspective on the position where the adolescent can be found.

In sum there are several findings in this thesis that make psychosocial development interesting for criminology. First, the results showed that development of psychosocial maturity offers new contributing explanations with development of problem behaviour. Furthermore, the use of stage-theories offers a different approach, next to static, dynamic and typological approaches. Subsequently, the explanation of criminal development through less abstract constructs is most likely helpful.

However, the total contribution of psychosocial development to the explanation of delinquency is difficult to judge. From the studies it can be seen that, although results were significant, the explained variance was modest. One of the most important results in this matter may be the difference in gender. Psychosocial development differs in pace for boys and girls. From the results in this thesis it can be suggested that the gender differences can be interpreted in a way that psychosocial development may in practice act as a risk factor for problem behaviour for boys and as a protective factor for girls. A question to be studied still is whether girls, are earlier in development, also, as prone to problematic behaviour. Either way, they also have to go through the “problematic levels” of psychosocial development.

## 6.5 Policy Implications

Authorities often see problem behaviour as an omen to a future delinquent career. As a result, punishment and even relatively intrusive correctional methods may be used. However, the majority of the adolescent population that behaves deviant starts in early adolescence and desists over time (Donker, 2004; Blokland, 2005). Our studies show two things. First, severe problem behaviour appears to be associated with pre-normative levels of development. However, if adolescents are punished, the adolescent is often considered already to be *mature enough* to undergo this punishment. One should ask whether the criminal justice system should not be more *aware of psychological immaturity* (Westenberg, 2008).

Secondly, the manifestation of mild problem behaviour is, as this study shows, mainly normative and needs guidance and less punishment. Regulating adolescent behaviour needs a differentiation in terms of adapting the regulation for the levels of psychosocial development. This could be practised by adapting the regulation for each age cohort, in for instance, school-policy on truancy, or other forms of misbehaviour. In doing so, the adolescent is not regarded as full-grown adult nor seen as a child, but spoken to on the level the adolescent understands. Gender should in this case also be taken into account. It requires a differentiation in approaching boys and girls on a psychosocial level, espe-

cially when it comes to problematic behaviour, where gender differences occur mainly in underdeveloped-normative for boys and normative-precocious for girls.

## 6.6 Methodological issues and limitations

There are several limitations in this study. First of all, the measures that are included for this study concern self-report questionnaires. The use of self-report data can be interpreted in various ways. A disadvantage for using self-report data is the chance of excluding a considerable part of problem behaviour. Although anonymity is assured, adolescents may feel uncomfortable telling that they committed an (serious) offence. Although this may seem a critical point in the current design, earlier research has yet not succeeded in pointing out that official records are better in describing the entire range of problematic behaviour. Also self-report data on problem behaviour has the advantage of being able to describe and interpret lighter forms of problem behaviour, often seen as predictors of serious problem behaviour. A disadvantage is again that developmental stage may have interacted with response style. Only with additional data can this hypothesis be tested.

A second limitation is the large attrition group from the first wave. The design of the study had two time points. As such, retrieving the attrition group in a possible third wave was not possible. Furthermore, we collected our data in class, risking the possible truancy, illness and other reasons not being in class at that particular moment. Unfortunately, we discovered that the group being absent in the second wave conducted the more severe problem behaviour in the first wave. This problem is often seen in longitudinal studies on externalising and internalising problem behaviour, (Reitz, 2004). As such the most troubled adolescents were underrepresented in the studies, most likely leading to weaker results and less explained variance. Although attrition was high, the results did show some effects. This implies that the results we found are relatively “pure”, i.e. the group of adolescents one expects to under develop, were filtered out and the group that did not, stayed.

A third limitation is the small amount of waves implemented in this study. With more than two waves, trajectories of psychosocial development could be constructed, and a more detailed description could be made of the long-term effect psychosocial development on problem behaviour. Also, with the use of more time points, the sample will be more spread over the various levels of psychosocial development.

A final limitation concerns the sample used for this study. It is preferred that the sample can be generalised for the entire population at hand. Current design was not able to do so. However, the sample used is largely representative for youth in average to lower level secondary schools in South Holland. The distribution was equally divided in boys and girls. Also the distribution between the different ethnic origins was taken into consideration. This is done by over-sampling the Dutch adolescent in the so-called white schools from more rural places in South Holland.

## 6.7 Future research

Current studies used self-report data. This resulted in a considerable attrition. However, studies focusing on self-report data are known for their much wider reach. Respondents are more willing to report milder offences. However, respondents are often less willing in reporting more serious problem behaviour or crimes that are more serious in nature. The other way to collect data is by studying official records. Often, these records do consist of the more serious crimes, but have less information about the more mild behaviour and crimes ("dark number"). Nowadays, large studies use a combination of collecting their data. Also, as discussed previously, the use of self-report data resulted in, most likely, a dark number of the more serious offences (though anonymity was assured). The use of official data is then perhaps a good supplement to be related to the psychosocial development. The self-report data used in current study could be compared with official records. The latter type of data show often more severe offences, which were hardly reported in current studies. Combining self-report data with official records could lead to a greater differentiation between those who remain relatively normative in their deviant behaviour and those who step over the line and do seem to undergo the trajectory of persisting offenders. Also, the use of data from teachers and parents on the adolescents' behaviour could prove a good additional source of information.

In line with this is the recommendation to use more time points over a longer period. By doing so, it is possible to observe differences in development between the various paths of psychosocial development. One could ask whether an adolescent stays in the designated path, or that the adolescent eventually changes to the normative developmental path. Furthermore the use of more time points over a longer period could show clearer results regarding the differences between boys and girls. It appeared from the results in this thesis that girls are more prevalent in the precocious development. Boys on the other hand are more present in the underdeveloped paths than girls. Also, with more time points it is possible to investigate the trajectories that the paths take. It appeared that with two time points the possibility to regress became rather eminent. What is the actual value of the regressing path? Loevinger already stated in her original theory that regressing in psychosocial development is not a structural phenomenon. So, in our study with just two waves this may have been simply unreliability. Studies should address the question whether regressing development should be considered a measurement error instead of something fundamental to consider.

Although the present studies do mention the separate effect of boys and girls, future studies could consider a more detailed analysis of the longitudinal effect psychosocial development has on the development of problem behaviour differentiated in gender. As is discussed previously, boys and girls develop differently in psychosocial maturity and in development of problem behaviour. This difference needs more investigation. Girls are faster in psychosocial development, and boys are more prevalent in problem behaviour. Which girls are then specifically behaving problematic and do boys behave problematically when they are precocious in their psychosocial maturity? So, especially regarding the influence of psychological reflection on the Self, the other and the environment on problem behaviour, an in-depth investigation is important with the gender differences kept in mind.

The current dataset can be related in future studies to a fourth wave of data collection, which is collected in 2005. A part of the sample was approached a year after the final year at secondary school. This sample only administered the general questionnaire, but the sample could give a good impression of how level of psychosocial development relates to future (absence of) problematic behaviour.

In sum, this dissertation addressed several new perspectives on the explanation of problem behaviour development. The suggestions mentioned above, i.e. more measurement waves, implementation of official records, and greater focus on gender differences could help to improve the understanding of the relation between psychosocial development and problematic behaviour.

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