GENERAL INTRODUCTION
Juvenile delinquency is an important subject in social policy and research given the high emotional and financial costs of this phenomenon for society (Corso, Mercy, Simon, Finkelstein, & Miller, 2007; Welsh et al., 2008). More than its adult counterpart, the juvenile offender approach generally aims at treatment, rehabilitation and prevention of future delinquency rather than just retribution and containment. Over the past decades, this focus had led to an elaborate research base on what works and what does not work in the treatment and prevention of juvenile offending.

One of the leading theoretical models in effective offender treatment is that of the What Works principles (Andrews & Bonta, 2010b; Bonta & Andrews, 2007). This model describes requirements that a judicial intervention must meet in order to be effective in reducing reoffending. According to this model, an effective intervention must take risk, needs, and responsivity (RNR) into account. That is, an intervention should be proportionate to the offenders’ reoffending risk, which means that juveniles with lower risk of reoffending should receive less intensive and elaborate intervention than juveniles with higher risk. Furthermore, assessment should be made to examine the criminogenic needs of the juvenile, and the intervention should target those specific (treatment) needs. Finally, the intervention (and its’ practitioner) should match the characteristics, preferences, and possibilities of the juvenile in order to provide responsive treatment. In addition to these three main principles, the model also prescribes that an intervention should target multiple problem domains and should work with multiple treatment approaches in order to do so (treatment modality). Moreover, the treatment should be executed in line with its plan/manual (program integrity), and its’ practitioner should be well trained and supervised (professionality).

To date, the validity of this model has been shown in multiple meta-analytic review studies. That is, interventions that follow the What Works principles have indeed shown to be the most effective in juvenile offender treatment (see e.g., Goense, Assink, Stams, Boendermaker, & Hoeve, 2016; Koehler, Lösel, Akoensi, & Humphreys, 2013; Leijten, Melendez-Torres, Knerr, & Gardner, 2016; Lipsey, Landenberger, & Wilson, 2007; Lipsey, 2009; Van der Stouwe, Asscher, Stams, Deković, & Van der Laan, 2014). Interestingly, the largest treatment effects have been found with the most severe juveniles and the most intensive treatments, with the best outlined treatment protocols (such as Multisystemic Therapy, Functional Family Therapy and Aggression Replacement Therapy). For less severe juvenile offenders, there is less consensus about which programs or program types are the most effective.

One of the generic treatment types that is a long-established practice in the prevention and treatment of relatively lower risk juvenile delinquency, is social skills training (SST) (Lipsey, Howell, Kelly, Chapman, & Carver, 2010; Lipsey, 2009). Based on the assumption that criminal behavior is a consequence of a lack of social skills (e.g., the inability to deal with group pressure, or having antisocial cognitions, Dishion, Loeber, Stouthamer-Loeber, & Patterson, 1984; Freedman, Rosenthal, Donahoe Jr., Schlundt, & McFall, 1978; Gaffney & McFall, 1981; Larson, Whitton, Hauser, & Allen, 2007; Ter Laak et al., 2003), improving those skills could arguably change the juvenile “from antisocial to prosocial”, and in turn prevent reoffending. However, the empirical evidence to support this assumption is limited, and it is particularly unclear for whom and under which conditions SST could be the most effective. Therefore, the current dissertation investigated the effectiveness of SST for juvenile offenders.

The following sections provide an overview of the extant research on the effectiveness of SST for juvenile offenders. Next, a promising Dutch SST for juvenile offenders, “Tools4U”, is introduced. Finally, an outline of the current dissertation is presented.
SST EFFECTIVENESS

Over the past decades, numerous (review) studies have been conducted on the effects of SST in various settings and for various target populations (see e.g., Ang & Hughes, 2002; Cook et al., 2008; Lösel & Beelmann, 2003; Maag, 2006; Turner et al., 2018). To date, no review studies have been conducted on the treatment effects of SST for juvenile offenders specifically. However, existing review studies in which SSTs for juvenile offenders have been included among other interventions or target populations show promising outcomes for juvenile offender SST. For example, a review study on the effects of juvenile offender treatment on reoffending included SSTs among “skill building programs”. The study found that SSTs had a small positive effect (i.e., 13% reduction) on reoffending, one year post-treatment (Lipsey, 2009).

Moreover, several reviews have been conducted on the effects of SSTs for emotionally and/or behaviorally disturbed juveniles on a variety of mostly “soft” outcomes (i.e., skills and behavior, not limited to antisocial behavior). These studies have found moderate positive effects immediately after training, and small positive effects six months post-treatment (Ang & Hughes, 2002; Cook et al., 2008; Maag, 2006). However, the targeted behavioral problems in these reviews were substantially broader than offending, and the treatment group was mostly compared to a non-treatment or placebo control group. Arguably, this could indicate an overestimation of the effects of SSTs for juvenile offenders only, in particular when compared to alternative treatment (i.e., treatment as usual, TAU).

The aforementioned reviews may provide several indications about for whom and under which conditions SST may be most effective for juvenile offenders. These indications are mostly in line with the What Works principles of judicial interventions (Andrews & Bonta, 2010b; Bonta & Andrews, 2007).

First, SSTs should aim at juveniles with a low to moderate risk of reoffending (risk principle), given the fact that effects of skill building programs have shown to be smaller with juveniles with a higher risk of reoffending due to an extensive history of aggression (Lipsey, 2009). Moreover, skill building programs have shown to be the most effective as a (supervised) community treatment (Lipsey, 2009), which is in line with the generally relatively low to moderate intensity and frequency of most SSTs.

Second, pre-treatment assessments should be conducted to adequately match the SST and its trainer to the juvenile (responsivity principle). Given the cognitive (behavioral) orientation of most SSTs, it is particularly important to assess whether the juvenile has the (cognitive) abilities to benefit from SST training techniques (Cook et al., 2008).

Third, previous SST studies have shown difficulty with generalization of trained skills to outside the training context, which may have led to the limited long-term treatment effects (Cook et al., 2008; Maag, 2006). Arguably, SSTs could be most effective when they target multiple problem areas, and use multiple treatment approaches (treatment modality principle), with particular attention to generalization of trained skills.

Fourth and finally, in previous studies it has been unclear to which degree SST treatment programs have been conducted according to their training plan/manual (Cook et al., 2008; Gresham, Cook, Crews, & Kern, 2004; Maag, 2006). This is particularly relevant given the fact that treatment programs with high treatment integrity (program integrity principle) have shown to be more effective in reducing reoffending (Goense et al., 2016; Lipsey, 2009). The treatment integrity of juvenile offender SSTs should therefore be assessed and optimized to provide (more) effective treatment.
Tools4U is a juvenile offender SST that may be considered particularly promising considering the (theoretical) conditions for effective (SST) treatment. Tools4U is an outpatient, individual SST, which is applied as a penal sanction for juvenile delinquents in the Netherlands (Albrecht & Spanjaard, 2011). It is intended for delinquent juveniles (aged 12 to 18 years) for whom a lack of cognitive and social skills is related to delinquent behavior, and targets juveniles with a moderate risk of reoffending who are willing to participate in the training. The training consists of 8 or 12 weekly 1.5 hour meetings, which can be expanded by two parent-only and two parent-child meetings when a lack of parental monitoring and problem-solving has contributed to the delinquent behavior.

In the development of Tools4U, multiple efforts have been made to comply with the What Works principles to obtain the largest (potential) treatment effect and therefore obtain larger effects than existing SSTs. First, the training is described in an elaborate treatment manual that outlines – among other things – specific indication criteria, treatment targets and the order and contents of specific meetings and treatment techniques (Albrecht & Spanjaard, 2011). Second, to ensure the integrity of the training and the professionality of its’ trainers, it includes specific requirements for the supervision and up-skilling of trainers. Third, to improve the lack of generalizability of treatment effects found in previous studies (Cook et al., 2008; Maag, 2006), treatment techniques that are thought to increase generalizability (such as homework exercises), and the active involvement of parents are considered main components of the training.

In addition to the elaborate theoretical foundation that the treatment manual provides for Tools4U, the manual also enables the measurement of treatment integrity. An early study on the program integrity of Tools4U found that both indication of juveniles for training and implementation of the training (requirements) were insufficient (Bosma, Asscher, Van der Laan, & Stams, 2011). After multiple improvements were made with regard to indication to and execution of Tools4U, a replication study two years later showed that most juveniles now met the indication criteria of Tools4U, and that the training was mostly conducted as prescribed (Van der Stouwe, Asscher, & Stams, 2013). Consequently, Tools4U should, in theory, be effective in reducing reoffending by reducing social skills deficits. It is, however, unclear whether Tools4U is, in practice, effective in reducing social skills deficits and reoffending, and for whom and under which conditions it is the most effective. An important aim of this dissertation is therefore to determine whether the theoretical effects of Tools4U persist in clinical practice.

**DISSERTATION OUTLINE**

This dissertation aims to gain insights into the effectiveness of SST in the treatment of juvenile offending in general, and into the effectiveness of SST Tools4U in the Netherlands in particular. Chapter 2 presents the results of a quasi-experimental study of the post-treatment effects of Dutch SST Tools4U on multiple social (cognitive) skills. Additionally, moderator analyses were conducted to investigate whether Tools4U was more or less effective depending on age, gender, ethnicity, and risk of reoffending.

Chapter 3 and 4 report on studies to gain more insight in for whom and under which conditions Tools4U is the most effective. First, given the fact that a minimal level of treatment motivation is, in theory, conditional for the effectiveness of Tools4U, the influence of treatment motivation on post-treatment
effects were examined and presented in Chapter 3. Second, in Chapter 4 the influence of affective empathy on treatment effects on social information processing skills is examined.

The study in Chapter 5 evaluates the long-term effects of Tools4U on reoffending; its’ ultimate treatment target. In addition to reoffending effects at a follow-up of 6 and 12 months and 1.46 years, the moderating effects of age, gender, ethnicity, offense history characteristics, and post-treatment effects on social skills were examined.

To examine how the effectiveness of Tools4U relates to existing SST research, Chapter 6 reports on a meta-analytical review about the effects of SST on reoffending, social skills, externalizing and internalizing behavior. Moderating effects of multiple study, sample, treatment, and outcome characteristics were examined, and multivariate analyses were conducted including significant moderators to determine their unique contribution.

Finally, Chapter 7 provides an overall conclusion of the dissertation. The results of the above-mentioned studies are discussed and combined to determine the effectiveness of Tools4U and SSTs for juvenile offenders. Furthermore, the strengths and limitations of the dissertation are mentioned, and suggestions for future research as well as the implications of this dissertation for clinical practice are given.