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Treatment Motivation and Living Group Climate in German Youth Prison: A Validation of the German Adolescent Treatment Motivation Questionnaire

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ABSTRACT

Treatment motivation is one of the basic requirements for successful treatment and rehabilitation in youth detention. Treatment motivation is often presumed, but rarely assessed, because there is a lack of reliable and valid measurement instruments to investigate treatment motivation in detained youth, especially in Germany. The Adolescent Treatment Motivation Questionnaire (ATMQ) provides insight into the treatment motivation of young prisoners. The present study examined the construct validity and reliability of the German ATMQ in a sample of 76 German delinquents. A confirmatory factor analysis showed a good fit to the data, indicating construct validity. Cronbach's alpha reliability coefficients were good. Concurrent validity was supported by significant relations between treatment motivation and living group climate. The German ATMQ (8 items) can be used to assess treatment motivation in judicial and forensic psychiatric care in order to improve treatment motivation.

KEYWORDS

adolescent treatment motivation questionnaire (ATMQ); Germany; validation study; youth prison

Introduction

Most adolescent criminals suffer from social, developmental and psychiatric problems (Ankarsater et al., 2007).They often lack motivation to change their behavior, and have no motivation to address their problems (McMurran & Ward, 2010). Although youth crime has declined in Europe recently (Center for Disease Control and Prevention (CDC), 2013; European Commission, 2014), the severity of crimes and the high level of recidivism continue to have a negative impact on society and to interfere with reintegration back into society (Blumstein, 2002; CDC, 2013; Edwards & Mottarella,, 2015; European Commission, 2014; Stelly & Thomas, 2013).

There is scientific consensus that imprisonment in itself has no positive outcomes (Snodgrass, Blokland, Haviland, Nieuwbeerta, & Nagin, 2011), but providing treatment in secure residential care has shown modest

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positive effects (for an overview see: de Swart et al., 2012; Souverein, Van der Helm, & Stams, 2013; Strijbosch et al., 2015). Treatment motivation is considered to be the basis for effective treatment (Miller & Rollnick, 2002), especially for outcomes and success of compulsory treatment, for example in youth detention (McMurran, 2009). Treatment motivation has shown to be positively affected by an open and therapeutic living group climate (Van der Helm, Wissink, De Jongh, & Stams, 2012) and can result in rehabilitation and recidivism reduction (Axford, Little, Morpeth, & Weyts, 2005; Gendreau, Goggin, French, & Smith, 2006; Olver, Stockdale, & Wormith, 2011; Van der Helm, Stams, & de Jongh, 2012). Lack of motivation and non-completion of treatment is a common problem in the youth correctional context (McMurran & Ward, 2010) and constitutes a pressing, but neglected problem in forensic youth care (Marshall & Burton, 2010). In European countries investigation of treatment motivation in detained juvenile delinquents is still an under-researched topic. Valid and reliable measurement instruments are lacking (see overview by Verdonck et al., 2009).

Treatment Motivation

Treatment motivation is defined by Miller and Rollnick (2002) as, "a state of readiness or eagerness" to seek out help and work actively on problem solutions and changing environmental conditions (Morisson, Benett, Van der Helm, & Juffermans, 2010). Motivation is a human characteristic related to internal and external processes (Miller & Rollnick, 1991), which is influenced by a combination of personal and environmental factors leading to a specific behavior (Bogaerts & Poiesz, 2007; Carey, Purnine, Maisto, & Carey, 1999; Ward, Day, Howells, & Birgden, 2004). Recruitment, engagement, and retention in especially residential treatment (McMurran, 2009) are considered to be the basis for treatment success (Miller & Rollnick, 2002) and have been shown to be affected by both group workers as well as juveniles (Diamond, Hogue, Liddle, & Dakof, 1999).

Treatment motivation is part of the responsivity principle of the RNR (risks-needs-responsivity) model of Andrews and Bonta (2010), which specifies three principles of judicial interventions that should be adhered to in order to obtain positive results. The *risk principle* states that the intensity of treatment should match the risk of (re)committing a criminal offense, the *need principle* states that dynamic (i.e., changeable) criminogenic risk factors should be assessed by agencies and targeted in treatment. The *responsivity principle* assumes that correctional treatment programs should be fine-tailored to the abilities, learning styles, and motivation of the offender. A positive treatment motivation is thus assumed to be one of the preconditions of effective residential treatment (Andrews et al., 1990;

Van der Helm, Klapwijk, Stams, & Van der Laan, 2009; Van der Helm et al., 2012).

The main target of adolescent imprisonment in Germany is rehabilitation (Jugendstrafvollzugsgesetz Nordrhein-Westfalen, 2014) and is the responsibility of the different federal states (Bundesländer). As the present study is executed in Nordrhein-Westfalen, we focus on this federal state only. The German prison system has a main focus on education to prepare for reintegration into the labor market (Jugendstrafvollzugsgesetz Nordrhein-Westfalen, 2014), which is thought to result in a job, contact with prosocial friends, housing, and, as a result, reduced recidivism. The German system does not practice a psychological/therapeutic treatment approach, like the Dutch or Swedish youth prison system, to prepare for rehabilitation (Heynen, Behrens, & Van der Helm, 2016). This means that in practice, only those prisoners receive interventions who need special treatment due to substance abuse or psychiatric disorders (McMurran & Ward, 2010). However, detained juvenile delinquents also experience psychosocial problems or symptoms that do not (per se) fit a psychiatric diagnosis, such as impaired social functioning (Moffit, 1993; Van der Helm, Matthys, Moonen, Giesen, Van der Heide, & Stams, 2012), emotion-regulating deficiencies (Fairchild, Van Goozen, Calder, & Goodyer, 2013; Raine, 2013), immature moral judgment (Stams et al., 2006) or a mild intellectual disability (Kaal, 2011; Kaal, Brand, & Van Nieuwenhuijzen, 2011; Loeber et al., 2012). According to ample research (Casey et al., 2005; Souverein et al., 2013; White, Shi, Hirschfield, Mun, & Loeber, 2010) there is strong empirical evidence showing that specific negative characteristics of the prison environment can hamper inmates´ personal development, which may contribute to recidivism (Listwan, Sullivan, Agnew, Cullen, & Colvin, 2013). Recent research has shown that a positive living group climate, designated by growth, positive support, a good atmosphere and low repression, is associated with treatment motivation in detained juvenile delinquents through a stimulation of their internal locus of control (Van der Helm, Stams, Van Genabeek, & Van der Laan, 2011, 2012). Decreased treatment motivation can be, among others, the result of a highly repressive living group climate (Diamond et al., 1999; Harvey, 2005; Van der Helm et al., 2009; Van der Helm et al., 2012), which can diminish treatment success and hamper rehabilitation (Schubert, Mulvey, Loughran, & Loyosa, 2012). Especially a positive therapeutic alliance between group workers and juveniles can support treatment motivation, treatment success, and can lower therapy dropout in forensic youth care (Constantino, Castonguay, Zack, & DeGeorge, 2010; Roest, Van der Helm, Strijbosch, Van Brandenburg, & Stams, 2014; Shirk, Karver, & Brown, 2011). Verdonck and Jaspaert (2009), in their review of treatment motivation questionnaires, recommended the development and validation of a valid and reliable instrument for the assessment of treatment

motivation in juvenile delinquents, specifically for the use in juvenile forensic institutions. They concluded that only one out of 27 instruments was sufficiently validated, namely the Motivation for Treatment Questionnaire (MTQ). This instrument is based on the Trans Theoretical Model (TTM) of Prochaska and DiClimente (1986), which is an empirically derived stage model of intentional behavior change, which derives its theoretical basis from psychodynamic and cognitive behavioral theory (Prochaska, DiClemente, & Norcross, 1992; Van der Helm et al., 2012). Furthermore, this instrument is based on an abbreviated form of the Dutch translation of the "Readiness to Change Questionnaire" (Miller & Rollnick, 2002; Rollnick et al., 1992).

Prochaska and DiClimente (1986) proposed a 5-stage model of treatment motivation: *precontemplation (not currently considering change), contemplation (ambivalent about change), preparation (some experiences with change and trying to change), action (practicing new behavior), and maintenance (continued commitment to sustaining new behavior)* (Prochaska & DiClimente, 1986; Prochaska et al., 1992). However, empirical research has questioned such a stage model (Whitelaw, Baldwin, Bunton, & Flynn, 2000), especially in young criminals, who easily relapse into old habits, violating the assumed fixed stage sequence (Edwards & Van den Eynde, 2013). It should also be noted that a substantial number of young criminals have a mild intellectual disability (Morrison & Cosden, 1997), resulting in a limited capacity of contemplation.

The Dutch version of the MTQ (Van Binsbergen, 2003) is based on two main motivational concepts, that is: readiness to establish therapeutic contact and decision to change. In another study on incarcerated adolescents, Van der Helm et al. (2009) found one factor to be particularly important to work on positive changes in adolescents' behavior problems in residential youth care, namely, active treatment motivation. However, it should be noticed that active treatment motivation may only develop over a longer period of time and is conditional upon a therapeutic group climate and the responsiveness of group workers to the developmental needs of the adolescents (Fitzpatrick & Irannejad, 2008; Van der Helm et al., 2012).

Previous research found the original MTQ to be too complex for the use in juvenile delinquents, especially for juveniles with mild intellectual disabilities or a limited span of attention (Dubbelaar, 2012; Van der Helm et al., 2009). To accommodate for problems with questionnaire length and cognitive complexity, Van der Helm et al. (2009) developed a brief and simplified version of the original MTQ, designated as the Adolescent Treatment Motivation Questionnaire (ATMQ). The original Dutch version of the ATMQ was based on the abbreviated version of the Motivation for Treatment Questionnaire developed by Van Binsbergen (2003) using the concept of the 5-phase model of motivation for change of Prochaska and DiClemente (1986) (for more information see, Van der Helm et al., 2012). The ATMQ was developed to investigate 'readiness to change', which

requires active engagement of the client. The ATMQ, which is validated for Germany in the present study, assesses aspects of the final three stages of the model of Prochaska and DiClemente (*preparation, action*, and *maintenance)* in a continuous measure of readiness to change. The ATMQ has been shown to be a parsimonious, valid and reliable measurement instrument to investigate treatment motivation in Dutch youth correctional facilities, showing a positive relation with an open and therapeutic living group climate in prison (Van der Helm et al., 2012).

The aim of the present study was to test the construct validity of the translated German version of the ATMQ by means of a confirmatory factor analysis (CFA), to examine the reliability of the German ATMQ, and to establish concurrent validity by examining the relation between treatment motivation and living group climate in incarcerated German juvenile offenders.

Method

Participants

A sample of 76 male, adolescent and young adult prisoners in a German youth prison completed the translated German version of the ATMQ. Main detention time in this prison was 9 months. Participants were aged between 17 and 26 ($M = 20.26$, $SD = 2.21$). The response rate was 98%. After ethical approval had been obtained from the Institutional Review Board of the University of Applied Sciences Leiden and in accordance with the policies of the Kriminologischer Dienst des Landes Nordrhein-Westfalen, Nordrhein-Westfalen, Germany, all adolescents voluntarily agreed to participate in this study, signed an informed consent declaration, and were told that their answers would be treated confidentially and would be accessed only by the researchers. Participants were randomly selected from the prison population. The mean detention time in the prison was nine months.

Measures

Adolescent Treatment Motivation Questionnaire (ATMQ)

For the present study the Dutch version of the ATMQ (Van der Helm et al., 2012) was translated into German by the first author of this article, a bi-lingual native German and Dutch speaker. The German ATMQ was then back translated by a second bi-lingual native Dutch and German speaker. The German version of the ATMQ consisted also of 11 items on a 3-point answering scale with thumb pictures (thumbs up or down) for a better comprehension by participants with mild intellectual disabilities. The score for treatment motivation was the sum of all scores on the items divided by the number of the questions. A higher score indicated more treatment motivation. Table 1 shows the means and standard deviations of the ATMQ scores.

Table 1. Minimum, Maximum, Means, and Standard Deviations of Treatment Motivation and Living Group Climate of Juvenile Delinquents.

	N	Min.	Max.	Mean	Std
Support	68	1.42	4.92	3.10	.86
Growth	73	1.13	4.88	3.57	.90
Repression	68	1.89	4.89	3.30	.63
Atmosphere	72	1.29	4.57	3.09	.69
General Living Group Climate	62	1.69	4.17	3.11	.60
Treatment Motivation	74	1.13	3.00	2.09	.50

Prison Group Climate Instrument (PGCI)

The German version of the PGCI (Heynen, Van der Helm, Stams, & Korebrits, 2014) contains 36 questions ranging on a 5-point-likert scale from 1 = *don´t agree* to 5 = *fully agree*. Each question belongs to only one of the four aspects of living group climate: *support, growth, atmosphere*, and *repression*. The scale for "support" assesses the professional behavior of group workers and the support prisoners receive by them. The "growth" scale assesses the personal developmental possibilities, hope for future and feelings and thoughts about detention. The "repression" scale assesses repression, strictness of rules and the control prisoners experience during their imprisonment. Finally, the "atmosphere" scale assesses group atmosphere related to feelings of safety and trust (Heynen et al., 2014; Van der Helm, Stams, & Van der Laan, 2011). The questionnaire measures whether the climate in a group setting is open or closed. An open group climate is defined by high levels of support, ample opportunities for growth, minimal repression and a clean, safe and structured environment (Heynen et al., 2014). Table 1 shows the means and standard deviations of the PGCI.

Statistical Analysis

For the German validation of the ATMQ, a confirmatory factor analysis was performed using *Mplus* (version 6.11). For a model that fit the data well, a cut-off value of *CFI* > 0.90, *TLI* > 0.90, and *RMSEA* < 0.05 is required (Kline, 2005). Calculation of *Cronbach's Alpha* and correlational analyses were conducted in SPSS 21.0 to examine internal consistency reliability, and subsequently test concurrent validity of the ATMQ. Concurrent validity is demonstrated if treatment motivation significantly correlates with the four factors of living group climate in the expected direction and the overall living group climate factor (Van der Helm et al., 2009). It is expected that treatment motivation will positively correlate with support, growth and atmosphere and negatively with repression.

Results

Construct Validity and Reliability of the ATMQ

A confirmatory factor analysis (CFA) of the 11 items was performed using *Mplus* (version 6.11). The model that best fitted the data contained 8 items; 3 items were removed due to low factor loadings (item 1: *it is good for me to be here*; item 4: *it matters which group worker is actually working*; item 6: *I need help*). The 8 item model showed a good fit to the data, indicating construct validity of the German ATMQ: *RMSEA* = .000, *CFI = 0.928, NFI = 0.992, TLI* = 0.899, $\chi^2(20)$ = 29.797, p = 0.073 (Table 2). Cronbach's Alpha was good (α = .79).

Concurrent Validity

Pearson's correlations were computed to investigate whether there is concurrent validity of the ATMQ. The general factor for treatment motivation (reduced model with 8 items) was significantly and positively correlated with *support* (r = .682, p = .000), *growth* (r = .641, p = .000), and *atmosphere* (r = *.315*, p = .008) and significantly and negatively correlated with *repression* (r = *-.246*, p = *.043;* see Table 3), which supports concurrent validity of the ATMQ.

Discussion

This study examined the validity and reliability of the German ATMQ in a group of juvenile delinquents in a German youth prison. Evidence for validity and reliability of the German ATMQ was found in results of the

Table 2. Confirmatory Factor Analysis of the German ATMQ (Items and Standardized Estimates; $N = 76$).

Item English	Item German	Estimate
1. My treatment helps me	Ich finde, dass meine Behandlung/Therapie sinnvoll ist.	.510
2. I talk with others about myself	Ich spreche mit anderen Menschen über mich selbst	.470
3. I better tell all my problems to the group workers	Ich erzähle den Justizvollzugsbeamten von all meinen Problemen	.760
4. I trust group workers	Ich vertraue den Justizvollzugsbeamten.	.630
5. I learn to work at my future here	Ich kann hier lernen, an meiner Zukunft zu arbeiten	.456
6. There is one group worker I can talk to about all my problems	Es gibt einen Justizvollzugsbeamten/eine Justizvollzugsbeamtin, womit ich meine Probleme besprechen kann	.630
7. I want to change my behavior together with group workers	Ich möchte mein Verhalten mit Hilfe der Justizvollzugsbeamten ändern	.712
8. I know how to help me, I talk about my problems with others	Ich weiß, wie man mir am besten helfen kann, ich spreche darüber	.378

Note. Items were translated from Dutch to German, for additional clarity Table 2 represents items in English and German language.

Table 3. Correlations Between ATMQ and PGCI.

	Support	Growth	Repression	Atmosphere	Total Living Group Climate
Growth	.499**				
Repression	−.474**	−.384**			
Atmosphere	.502**	.546**	−.499**		
Total Living Group Climate	.849**	.778**	−.709**	.807**	
Treatment Motivation	.682**	.641**	−.246*	.315**	.648**

** $p > .01$. * $p > .05$.

CFA, reliability analysis in terms of internal consistency, and relations between treatment motivation and living group climate. We therefore conclude that the 8-item German ATMQ can be used to validly and reliably assess treatment motivation within juvenile justice facilities in Germany.

Three items of the original questionnaire had to be removed. These questions relate to self-awareness, client-staff relationships and self-identification. From the perspective of the model of Prochaska and DiClimente (1986), two removed questions belong to the stage of pre-contemplation, and refer to the awareness of treatment needs, the first step to take in a process of changing ones behavior. Due to the fact that incarcerated juveniles find it difficult to acknowledge their problems, they may have problems answering these questions. German, compared to Dutch, youth prison is not focused on treatment, but on education (Heynen, Behrens, & Van der Helm, 2016). Also the social distance among inmates and group workers is relatively great in German youth prisons, negatively affecting therapeutic alliance, which is assessed by another item that had to be removed: "*it matters which group worker is actually working.*"

The present study has some limitations. The sample of the group of juvenile delinquents is small. Future research should therefore focus on a replication in a larger sample. Future studies should also examine test–retest reliability even as convergent and predictive validity of the German ATMQ. Convergent validity can be assessed by relating the assessment of treatment with the ATMQ to other instruments assessing treatment motivation, whereas predictive validity can be established by predicting recidivism from differences in treatment motivation. Additionally, future studies should focus on possible differences in factor structure between boys and girls, adolescents and young adults or juveniles from different cultural and ethical backgrounds, testing measurement invariance. Finally, future studies should also focus on time spent in the institution and the likelihood of recidivism.

The actual 8-item German version of the ATMQ can be used as a basis to target rehabilitation of delinquent youth. Advantages of a short measurement instrument to investigate treatment motivation are related to simple investigation and repeated measurements over a short period of time. This is

important as the stay of young prison inmates in detention mostly covers a short period of time (90 days–9 month). The ATMQ could be an important instrument not only to investigate treatment effects in youth prison, but also to assess the therapeutic effects of group treatment in terms of treatment motivation itself (Lane & Rollnick, 2009). Interventions targeting treatment motivation in youth correctional facilities could benefit from an accurate assessment of treatment motivation by using the ATMQ.

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