Psychological characteristics of Dutch violent forensic psychiatric in- and outpatients

Ruud H.J. Hornsveld (Ph.D.),
clinical psychologist/researcher,
Erasmus University Medical Center

r.hornsveld@tiscali.nl

www.Agressiehanteringstherapie.nl
Contents

Part 1
• “Models” for violent behavior
• New measurement instruments
• Psychological characteristics
• Aggression Replacement Training

Part 2
• Course of antisocial and prosocial behavior during the first three years of stay
• Predictors of behavior on the ward
• Consequences for treatment programs
“Models” for violent behavior
Risk-Need-Responsivity “Model” (Andrews & Bonta, 2010)

Criminogenic needs (“Central Eight”):

- history of antisocial behavior
- antisocial personality pattern
- antisocial cognitions
- antisocial associates
- family/marital circumstances
- school/work
- leisure/recreation
- substance abuse

Ten good live goals;

• healthy life
• knowledge
• excellence in play and work
• agency
• inner peace
• relatedness
• community
• spirituality
• happiness
• creativity
Comments on Risk-Need-Responsivity model and Good Lives Model

• Items have different abstraction levels
• Not that so much models, but more a list of areas for special attention
• Translation of each area in psychological characteristics is needed: functional analyses
Model for aggressive behavior

Conflict of interests

- Low score on psychopathy
- High score on psychopathy
- Cognitions:
  - high level of aspiration
  - antisocial norms
- Limited or inadequate social skills

Emotion:
- irritation, anger, rage, fury

Lack of emotion

Reactively aggressive behavior:
- verbal
- physical (violence)

Positive short-term consequences:
- goal achieved
- satisfaction
- higher status

Negative long-term consequences:
- escalation of conflict
- in contact with the judicial system
- being avoided by others

Proactively aggressive behavior:
- verbal
- physical (violence)

Low score on psychopathy

High score on psychopathy

Emotion: irritation, anger, rage, fury

Reactively aggressive behavior: verbal, physical

Positive short-term consequences: goal achieved, satisfaction, higher status

Negative long-term consequences: escalation of conflict, in contact with the judicial system, being avoided by others
New measurement instruments
Comments on most measurement instruments, used in forensic psychiatry

Problems

• Self-report questionnaires mostly developed using college or university students
• No investigation on the psychometric properties of these questionnaires in Dutch forensic psychiatric in- and outpatients
• Observation scales about aggression mostly developed for general psychiatric patients in crisis

Findings

• Questionnaires are reliable and valid when used for Dutch forensic psychiatric patients, but most divisions in subscales do not fit
Current measurement instruments for program evaluation

Personality traits

- *NEO Five-Factor Inventory* (NEO-FFI; Hoekstra, Ormel, & De Fruyt, 1996): neuroticism, agreeableness, and conscientiousness
- Trait Anger subscale of the Spielberger (1980) *State-Trait Anger Scale* (STAS; Van der Ploeg, Defares, & Spielberger, 1982): general disposition to anger
Behavior

- *Aggression Questionnaire* (AQ; Hornsveld, Muris, Kraaimaat, & Meesters, 2009): general aggression and physical aggression
- NAS part of the *Novaco Anger Scale-Provocation Inventory* (NAS-PI; Hornsveld, Muris, & Kraaimaat, 2011): anger
- *Inventory of Interpersonal Situations* (IIS; Van Dam-Baggen & Kraaimaat, 1999): social anxiety and frequency of social skills
New instruments for program evaluation

• Adapted version of Rosenzweig Picture-Frustration Study (PFS-AV: Hornsveld, Nijman, Hollin, & Kraaimaat, 2007a): hostility
• Observation Scale for Aggressive Behavior (OSAB; Hornsveld, Nijman, Hollin, & Kraaimaat, 2007b): behavior of forensic psychiatric inpatients on the ward
Adapted Version of Rosenzweig Picture-Frustration Study (PFS-AV): Hostility

You are not allowed to cross the street when the light is red.
Observation Scale for Aggressive Behavior (OSAB; Hornsveld et al., 2007)

Six subscales:
- Irritation/anger (5 items)
- Anxiety/Gloominess (4 items)
- Aggressive behavior (10 items)
- Prosocial behavior (12 items)
- Antecedents (6 items)
- Sanctions (3 items)

Scoring: Behavior on the ward during last week
Scores of subscales

Scoring of items: ‘no’ = 1, ‘seldom’ = 2, ‘occasionally’ = 3, and ‘frequently’ = 4

Range of subscale scores:

- Irritation/anger: 5 - 20
- Anxiety/Gloominess: 4 - 16
- Aggressive behavior: 10 - 40
- Prosocial behavior: 12 - 48
- Antecedents: 6 - 24
- Sanctions: 3 - 13
Dynamic criminogenic needs of forensic psychiatric patients
Inpatients versus norms (N = 136)

* p < .001
Inpatients versus norms ($N = 136$)

* $p < .001$
Inpatients $(N=136)$ versus detainees $(N=100)$

* $p < .004$
Inpatients ($N = 136$) versus detainees ($N = 100$)

* $p < .004$
Outpatients versus norms ($N = 200$)
Outpatients versus norms ($N = 200$)

* $p < .004$
Young outpatients \((N = 123)\) versus male students \((N = 160)\)
Aggression Replacement Training (ART)
Participants

Data sets
• 123 outpatients (mean age = 17.35 years, $SD = 1.82$, range: 15-21 years)
• 73 patients were measured both during the intake interview and at the start of the training (mean age = 17.12 years, $SD = 1.72$, range: 15-21 years)
• 62 patients completed the questionnaires at both the start and the end of the training (mean age = 17.35 years, $SD = 1.91$, range: 15-21 years)
• 61 patients withdrew prematurely during the waiting period or during the training (nonstarters plus non-completers; mean age 17.35 years, $SD = 1.82$, range: 15-21 years)
Measures

• *Psychopathy Checklist-Revised* (PCL-R; Vertommen, Verheul, De Ruiter, & Hildebrand, 2002)
• *NEO Five-Factor Inventory* (NEO-FFI; Hoekstra, Ormel, & De Fruyt, 1996)
• Trait Anger subscale of the Spielberger (1980) *State-Trait Anger Scale* (STAS; Van der Ploeg, Defares, & Spielberger, 1982)
• *Adapted Version of the Picture-Frustration Study* (PFS-AV; Hornsveld, Nijman, Hollin, & Kraaimaat, 2007)
• *Aggression Questionnaire* (AQ; Hornsveld, Muris, Kraaimaat, & Meesters, 2009)
Measures (continued)

• NAS part of the *Novaco Anger Scale-Provocation Inventory* (NAS-PI; Hornsveld, Muris, & Kraaimaat, 2011)

• *Inventory of Interpersonal Situations* (IIS; Van Dam-Baggen & Kraaimaat, 1999)
Outpatient ART and design

Outpatient ART
Fifteen weekly sessions lasting 1½ hours each and three five-weekly follow-up meetings for six to eight patients:
• anger management, sessions 1 to 5
• social skills, sessions 6 to 10
• moral reasoning, sessions 11 to 15
• follow-up and evaluation, sessions 16 to 18
Participants had to complete homework assignments

Design
Three measurement moments:
• at intake/before a waiting period
• after the waiting period/before the training
• after the training (post-training measurement)
Results

Criminogenic needs
• Compared with a reference group of 275 secondary vocational students, patients scored higher on trait anger, hostility, and aggression, and lower on social anxiety

Nonstarters and noncompleters
• Patients who withdrew prematurely scored higher on psychopathy than the completers, in particular on the factor antisocial behavior
## Intake measurement vs. pre measurement 
\((n = 73)\)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Content of scale</th>
<th>(M (SD))</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intake</td>
<td>Pre</td>
<td></td>
</tr>
<tr>
<td>PFS-AV</td>
<td>Hostility</td>
<td>33.22 (9.58)</td>
<td>34.16 (11.49)</td>
</tr>
<tr>
<td>AQ</td>
<td>Aggression</td>
<td>90.00 (27.88)</td>
<td>85.59 (21.57)</td>
</tr>
<tr>
<td></td>
<td>Phys. aggr.</td>
<td>33.01 (18.47)</td>
<td>29.48 (8.19)</td>
</tr>
<tr>
<td>NAS-PI</td>
<td>Anger</td>
<td>87.52 (17.35)*</td>
<td>90.81 (19.32)*</td>
</tr>
<tr>
<td>IIS</td>
<td>Social anxiety</td>
<td>71.43 (28.73)</td>
<td>68.07 (25.80)</td>
</tr>
<tr>
<td></td>
<td>Social skills</td>
<td>112.42 (25.19)</td>
<td>112.32 (25.18)</td>
</tr>
</tbody>
</table>

* \(p < .05\)
## Pre measurement vs. post measurement

*(n = 62)*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Content of scale</th>
<th>M (SD)</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>PFS-AV</td>
<td>Hostility</td>
<td>33.34 (12.30)</td>
<td>30.84 (12.27)</td>
</tr>
<tr>
<td>AQ</td>
<td>Aggression</td>
<td>82.56 (20.67)</td>
<td>78.90 (20.32)</td>
</tr>
<tr>
<td></td>
<td>Phys. aggr.</td>
<td>28.39 (8.02)*</td>
<td>26.45 (7.46)*</td>
</tr>
<tr>
<td>NAS-PI</td>
<td>Anger</td>
<td>87.29 (18.31)</td>
<td>83.98 (16.74)</td>
</tr>
<tr>
<td>IIS</td>
<td>Social anxiety</td>
<td>65.36 (22.75)*</td>
<td>57.74 (22.75)*</td>
</tr>
<tr>
<td></td>
<td>Social skills</td>
<td>115.88 (22.22)</td>
<td>116.93 (29.75)</td>
</tr>
</tbody>
</table>

* p < .05
Results (continued)

Behavior change

- No change in 73 patients between intake and pre measurement, except for an increase in anger.
- Compared with the pre training measurement, 62 patients scored lower on physical aggression and social anxiety during the post-training measurement. There was a trend in the reduction of hostility, aggression, and anger.
- After completion of the training, patients did not differ from the reference group of secondary vocational students with respect to hostility and aggressive behavior.
Discussion

Drop-out

• In the current study, 61 of the 123 patients did not show up at the start of the training or did not complete the training
• This result is in line with the results of other studies on treatment dropouts (e.g., Olver & Wong, 2009)
• Non-completion has been associated with a higher risk of recidivism (Wormith, Olver, Stevenson, & Girard, 2007), as well as aggression and rule-violating behaviors (Beyko & Wong, 2005)
• There seems to be a relation between psychopathy, treatment attrition, and recidivism risk
Consequences for treatment

- For this group of patients a more consequent and stricter policy is required among the referring agencies in case of drop-out
- Refusing to follow the training hardly had any negative consequences in most cases
- Creating alternative conditions and consequences for the completion of an obligatory treatment program has the highest priority
- For instance, the training can be provided at the office of the after-care and resettlement organization by a qualified trainer from the outpatient clinic and a probation officer
Behavior of Dutch violent forensic psychiatric inpatients on the ward

Ruud H.J. Hornsveld (Ph.D.),
clinical psychologist/researcher,
Erasmus University Medical Center

r.hornsveld@tiscali.nl

www.Agressiehanteringstherapie.nl
Observation Scale for Aggressive Behavior (OSAB; Hornsveld et al., 2007)

Three of the six subscales:
- Irritation/anger (5 items)
- Aggressive behavior (10 items)
- Prosocial behavior (12 items)

Scoring: Behavior on the ward during last week
**Table 1. Number of patients assessed on seven measurements**

<table>
<thead>
<tr>
<th></th>
<th>Total group</th>
<th>Personality disordered</th>
<th>Chronically psychotic</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>M (SD)</td>
<td>N</td>
<td>M (SD)</td>
</tr>
<tr>
<td>1</td>
<td>253 37.49 (10.38)</td>
<td>159 38.62 (10.64)</td>
<td>94 35.56 (9.69)</td>
</tr>
<tr>
<td>2</td>
<td>248 37.40 (10.44)</td>
<td>157 38.58 (10.68)</td>
<td>91 35.37 (9.75)</td>
</tr>
<tr>
<td>3</td>
<td>236 37.17 (10.41)</td>
<td>148 38.38 (10.66)</td>
<td>88 35.15 (9.69)</td>
</tr>
<tr>
<td>4</td>
<td>213 37.20 (10.34)</td>
<td>134 38.69 (10.88)</td>
<td>79 34.67 (8.86)</td>
</tr>
<tr>
<td>5</td>
<td>178 36.97 (10.46)</td>
<td>108 38.69 (11.14)</td>
<td>70 34.30 (8.74)</td>
</tr>
<tr>
<td>6</td>
<td>146 37.03 (10.17)</td>
<td>86 38.99 (10.77)</td>
<td>60 34.22 (8.58)</td>
</tr>
<tr>
<td>7</td>
<td>115 36.97 (10.27)</td>
<td>70 38.79 (10.75)</td>
<td>45 34.13 (8.85)</td>
</tr>
</tbody>
</table>
Figure 1. Course of irritation/anger and aggressive behavior during the first three years of stay.

- Irrit. Psych.
- Aggr. Psych.
Figure 2. Course of prosocial behavior during the first three years of stay
Figure 3. Course of irritation/anger and aggressive behavior during the first three years of stay.
Figure 4. Course of prosocial behavior during the first three years of stay
Table 2. Mean scores and SD’s in personality disordered and chronically psychotic patients

<table>
<thead>
<tr>
<th>Measure</th>
<th>Factor or sub-scale</th>
<th>Personality disordered</th>
<th>Chronically psychotic</th>
<th>Differences between subsamples</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>( N ) ( M ) (SD)</td>
<td>( N ) ( M ) (SD)</td>
<td></td>
</tr>
<tr>
<td>PCL-R</td>
<td>Psychop</td>
<td>159 22.25 (8.06)</td>
<td>94 17.96 (7.84)</td>
<td>( F(2,250) = 13.13 ) (( p &lt; .001 ))**</td>
</tr>
<tr>
<td></td>
<td>Interpers</td>
<td>159 3.57 (2.47)</td>
<td>94 1.80 (1.88)</td>
<td>( F(2,250) = 18.02 ) (( p &lt; .001 ))**</td>
</tr>
<tr>
<td></td>
<td>Affective</td>
<td>159 6.13 (1.72)</td>
<td>94 5.64 (1.84)</td>
<td>( F(2,250) = 3.10 ) (( p = .047 ))*</td>
</tr>
<tr>
<td></td>
<td>Lifestyle</td>
<td>159 5.94 (2.76)</td>
<td>94 4.98 (2.90)</td>
<td>( F(2,250) = 14.01 ) (( p &lt; .001 ))**</td>
</tr>
<tr>
<td></td>
<td>Antisoc</td>
<td>159 5.11 (2.81)</td>
<td>94 4.68 (2.81)</td>
<td>( F(2,250) = 6.58 ) (( p = .002 ))**</td>
</tr>
<tr>
<td>NEO-FFI</td>
<td>Neurot</td>
<td>97 32.24 (8.49)</td>
<td>48 31.73 (7.92)</td>
<td>( F(2,142) = 0.95 ) (( p = .909 ))</td>
</tr>
<tr>
<td></td>
<td>Agree</td>
<td>97 41.59 (5.23)</td>
<td>48 42.52 (4.93)</td>
<td>( F(2,142) = 0.53 ) (( p = .591 ))</td>
</tr>
<tr>
<td></td>
<td>STAS Anger</td>
<td>92 17.91 (6.64)</td>
<td>47 15.85 (4.29)</td>
<td>( F(2,136) = 1.94 ) (( p = .148 ))</td>
</tr>
</tbody>
</table>
Table 4. *Correlations assessed shortly after admittance*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Factors or sub-scales</th>
<th>Personality disordered patients</th>
<th>Chronically psychotic patients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Irritation/Anger</td>
<td>Aggressive behavior</td>
<td>Pro-social behavior</td>
</tr>
<tr>
<td>PCL-R</td>
<td>Psychp</td>
<td>.236**</td>
<td>.208**</td>
</tr>
<tr>
<td></td>
<td>Interper</td>
<td>.097</td>
<td>.069</td>
</tr>
<tr>
<td></td>
<td>Affect</td>
<td>.177*</td>
<td>.122</td>
</tr>
<tr>
<td></td>
<td>Lifest</td>
<td>.207**</td>
<td>.199*</td>
</tr>
<tr>
<td></td>
<td>Antisoc</td>
<td>.290**</td>
<td>.274**</td>
</tr>
<tr>
<td>NEO-FFI</td>
<td>Neurot</td>
<td>.199*</td>
<td>.209*</td>
</tr>
<tr>
<td></td>
<td>Agree</td>
<td>-.097</td>
<td>-.160</td>
</tr>
<tr>
<td>STAS</td>
<td>Anger</td>
<td>.140</td>
<td>.214*</td>
</tr>
</tbody>
</table>
Table 5. Change scores on the OSAB (measurement 1 vs. measurement 7)

<table>
<thead>
<tr>
<th>OSAB sub-scale</th>
<th>Personality disordered patients</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Chronically psychotic patients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Measure-</td>
<td>Measurement</td>
<td>Effect</td>
<td>Measure-</td>
<td>Measurement</td>
<td>Effect</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ment 1</td>
<td>7</td>
<td>size</td>
<td>1</td>
<td>7</td>
<td>size</td>
<td></td>
</tr>
<tr>
<td></td>
<td>M (SD)</td>
<td>M (SD)</td>
<td>d</td>
<td>M (SD)</td>
<td>M (SD)</td>
<td>d</td>
<td></td>
</tr>
<tr>
<td>Irrit./Anger</td>
<td>10.57 (3.31)</td>
<td>10.46 (3.04)</td>
<td>.057</td>
<td>9.60 (4.03)</td>
<td>9.36 (3.57)</td>
<td>.113</td>
<td></td>
</tr>
<tr>
<td>Aggr. beh.</td>
<td>14.93 (5.38)</td>
<td>15.16 (4.67)</td>
<td>.065</td>
<td>15.02 (6.15)</td>
<td>15.07 (5.79)</td>
<td>.015</td>
<td></td>
</tr>
<tr>
<td>Prosoc. beh.</td>
<td>29.50 (8.39)</td>
<td>32.70 (6.94)</td>
<td>.650</td>
<td>24.22 (7.99)</td>
<td>27.38 (7.60)</td>
<td>.646</td>
<td></td>
</tr>
</tbody>
</table>
Table 6. Outflow of patients

<table>
<thead>
<tr>
<th>Patients</th>
<th>Percentage</th>
<th>Age (standard deviation)</th>
<th>PCL-R (standard deviation)</th>
<th>Aggression on the ward (standard deviation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 measurements</td>
<td>56.4</td>
<td>36.97 (10.27)</td>
<td>20.49 (7.97)</td>
<td>14.97 (5.66)</td>
</tr>
<tr>
<td>3 year of stay but no 7 measurements</td>
<td>22.1</td>
<td>39.38 (11.78)</td>
<td>17.68 (7.94)</td>
<td>15.92 (4.60)</td>
</tr>
<tr>
<td>Reselection</td>
<td>9.8</td>
<td>36.95 (8.89)</td>
<td>22.63 (7.86)</td>
<td>16.16 (5.23)</td>
</tr>
<tr>
<td>Long-stay</td>
<td>2.9</td>
<td>55.00 (8.46)</td>
<td>23.40 (7.57)</td>
<td>18.40 (2.61)</td>
</tr>
<tr>
<td>Finishing TBS or leave</td>
<td>3.4</td>
<td>41.29 (11.94)</td>
<td>17.00 (8.25)</td>
<td>14.14 (2.48)</td>
</tr>
<tr>
<td>Others</td>
<td>5.4</td>
<td>35.89 (6.31)</td>
<td>25.67 (9.35)</td>
<td>15.67 (3.20)</td>
</tr>
</tbody>
</table>
Conclusions

• No relation between length of stay and mood, aggressive behavior, and sanctions.
• However, social skills are related to length of stay.
• Personality disordered patients exhibit more anger, more aggressive behavior, and more prosocial behavior than chronic psychotic patients.
• Patients with relatively high scores on the PCL-R exhibit more anger, more aggressive behavior, but also more prosocial behavior than patients with relatively low scores on the PCL-R.
• In general, base rates of negative behaviors are low.
Discussion and recommendations

• Outcome of treatment programs should not be based on negative but on positive behavior.
• Limited validity of risk assessment instruments if they are based on negative behaviors.
• Protective factors, which refer to positive behavior, can contribute considerably to a better prediction of recidivism risk (SAPROF).
• There is a group of inpatients for which a stay longer than three of four years has no incremental value.
References


References (continued)


