

Behavior and behavior change in forensic psychiatric inpatients

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Contents

- Introduction
- Study 1: - Method
 - Results
 - Conclusion
- Study 2: - Method
 - Results
 - Conclusion
- General conclusion and discussion



Study 1: Self-reported behavior

- There are only a few studies on the comparison of scores on self-report questionnaires about hostility, anger, and aggression in different populations known for their violent behavior.
- Consequently, norms for self-report questionnaires about these behaviors in forensic psychiatric inpatients, outpatients, and “normal” men are lacking.



Participants

	Forensic psychiatric patients				Students			
	Inpatients		Outpatients		Females		Males	
	<i>N</i>	Age	<i>N</i>	Age	<i>N</i>	Age	<i>N</i>	Age
AQ-SF	138	33.55 (7.65)	206	22.50 (8.86)	---	---	160	17.35 (1.08)
NAS-PI	142	33.16 (7.65)	194	22.79 (8.93)	160	18.36 (1.78)	160	17.35 (1.08)
BVAQ	110	33.45 (7.30)	139	23.73 (9.42)	---	---	160	17.35 (1.08)

AQ-SF = Aggression Questionnaire-Short-Form, NAS-PI = Novaco Anger Scale-Provocation Inventory, BVAQ = Bermond-Vorst Alexithymia Questionnaire



Inpatients

- Inpatients were detained under hospital order for a serious violent offense (e.g., murder, manslaughter, aggravated assault, or forcible rape), which is punishable with a minimum of four years.
- Rulings are based on the evaluations of a psychiatrist and/or psychologist at a special assessment center of the Ministry of Justice.
- The Ministry of Justice makes a distinction between patients with a personality disorder and patients with a chronic psychotic disorder as main diagnosis.



Outpatients and students

- Outpatients were referred to a forensic psychiatric outpatient clinic in Rotterdam as part of their sentence for violent offenses (e.g., assault, robbery with violence, or serious threats with violence).
- 160 male and 160 female students followed secondary vocational education in Rotterdam. In the Netherlands, secondary professional education is followed after elementary school and concerns education at the lowest level for trades such as carpenter, housepainter, electrician, administrative assistant, or hairdresser.



DSM-IV classifications

- The primary diagnosis of the inpatients was a cluster B personality disorder on axis II or a (chronic) psychotic disorder on axis I in combination with an antisocial personality disorder on axis II. The chronic psychiatric condition of the psychotic patients had been stabilized to the extent that their antisocial personality disorder was most prominent.
- The outpatients had a conduct disorder as primary diagnosis on axis I, or, if they were 18 years or older, a main diagnosis of antisocial personality disorder on axis II.



Measures

- Aggression Questionnaire-Short Form (AQ-SF; Bryant & Smith, 2001; Hornsveld, Muris, Kraaimaat, & Meesters, 2009);
- Novaco Anger Scale-Provocation Inventory (NAS-PI; Novaco, 1994; Hornsveld, Muris, & Kraaimaat, 2011);
- Bermond-Vorst Alexithymia Questionnaire (BVAQ; Vorst & Bermond, 2001; Hornsveld, & Kraaimaat, in press).



Procedures

- Data from the in- and outpatients were obtained during an evaluation trial of the Aggression Control Therapy (Hornsveld, Nijman, & Kraaimaat, 2008). Questionnaires were administered individually to the patients prior to the group therapy. When all items of the questionnaires were completed, patients received a fee of € 5 in return for their participation.
- The secondary vocational students completed the questionnaires in their classrooms at school. After a check on missing scores, students received a fee of € 10 in return for their participation.



Results

	<i>M (SD)</i>		Statistics
	Outpatients	Students	Outpatients vs. students
NAS	92.28 (17.94)	89.54 (14.34)	$F(2,351) = 5.27 (p = .003)^*$
AQ-SF	32.82 (10.32)	30.44 (8.41)	$F(2,363) = 13.29 (p < .001)^*$
BVAQ	120.08 (17.79)	113.89 (16.16)	$F(2,296) = 3.44 (p = .033)$

* $p < .006$



Results

	<i>M (SD)</i>		Statistics
	Inpatients	Outpatients	Inpatients vs. outpatients
NAS	82.64 (14.02)	92.28 (17.94)	$F(2,333) = 14.88 (p < .001)^*$
AQ-SF	28.16 (7.47)	32.82 (10.32)	$F(2,341) = 17.86 (p < .001)^*$
BVAQ	108.49 (21.36)	120.08 (17.79)	$F(2,246) = 11.17 (p < .001)^*$

* $p < .006$



Results

	<i>M (SD)</i>		Statistics
	Inpatients	Students	Inpatients vs. students
NAS	82.64 (14.02)	89.54 (14.34)	$F(2,299) = 9.78 (p = .001)^*$
AQ-SF	28.16 (7.47)	30.44 (8.41)	$F(2,295) = 3.09 (p = .047)$
BVAQ	108.49 (21.36)	113.89 (16.16)	$F(2,267) = 4.64 (p = .011)$

* $p < .006$



Conclusion

- *Outpatients* score higher than *students* on aggressive behavior and anger, and equal to students on problems with emotions;
- *Inpatients* score lower than violent *outpatients* on aggressive behavior, anger, and problems with emotions;
- *Inpatients* score lower than *students* on aggression and equal to students on anger and problems with emotions.



Study 2: Behavior change

- Several international studies on the behavior of violent juveniles and adults in residential settings, however hardly any studies on the progress in behavior as a result of hospitalization.
- A few studies on the behavior change of Dutch forensic psychiatric inpatients during their stay in a forensic psychiatric center.



Literature about TBS

- Van der Steeg (2010): 65 inpatients showed progress in attitude, but not in behavior, after the first two years of their stay, as measured by the FP-40;
- Nijman, De Kruijk, & Van Nieuwenhuizen (2004): 47 personality disordered inpatients improved in general functioning during the first 435 days of their stay, as measured by the Rehab; chronic psychotic inpatients demonstrated no improvement;
- De Jonge, Nijman, & Lammers (2009): 158 inpatients scored lower on recidivism risk after a stay of 25 months, as measured by the HKT-30.



Setting

- The current study was conducted at “De Kijvelanden”, a forensic psychiatric center with 178 beds or places in Poortugaal, near Rotterdam, The Netherlands.
- Patients are accommodated on nine wards, in a rehabilitation unit department, or in sheltered homes.
- During daytime, inpatients don't stay on the ward, but follow educational, vocational, and treatment programs elsewhere in the hospital. Altogether, patient-staff ratio is 1 to 1.8.
- In 2008, average length of stay was 4 years.



Measure

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.



Examples of items

- **Irritation/anger:** "agitated," "hostile;"
- **Anxiety/gloominess:** "anxious," "gloomy;"
- **Aggressive behavior:** "threats toward staff," "abusive language towards fellow patients;"
- **Prosocial behavior:** "adequately making contact with staff," "makes good proposals towards fellow patients;"
- **Antecedents:** "conflict about appointment," "conflict about restrictive measure;"
- **Sanctions:** "patient has to apologize," "patient is sent to his room;"



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

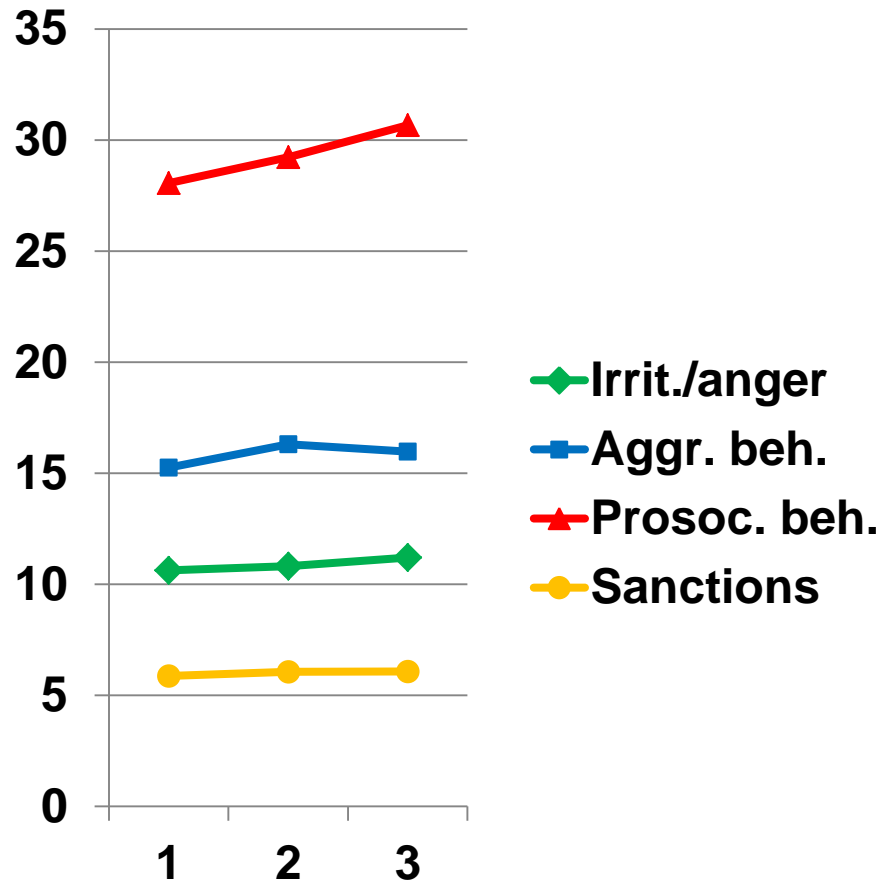


Procedure

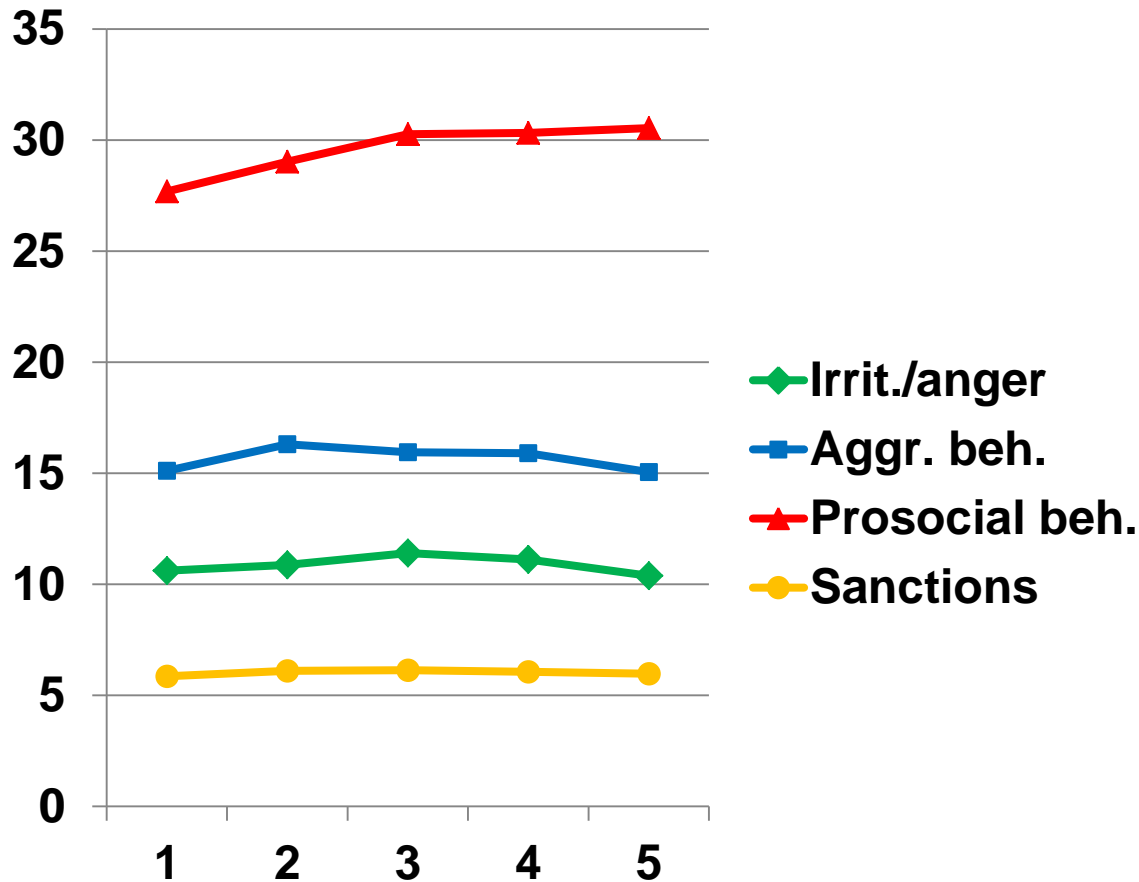
Bi-annual measures: In January and July staff members complete the OSAB for all patients on their ward.



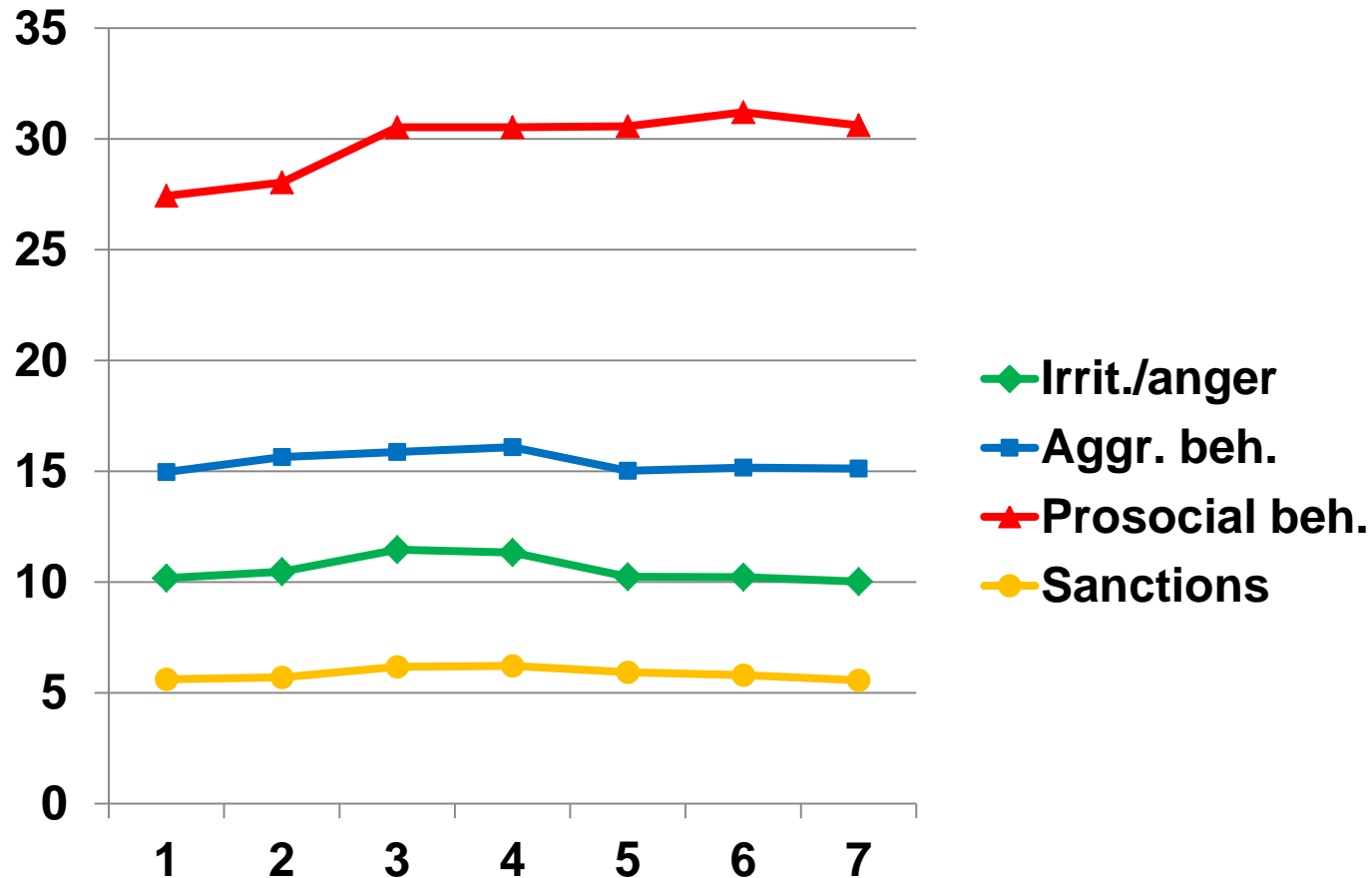
Behavior during the first year ($N = 236$)



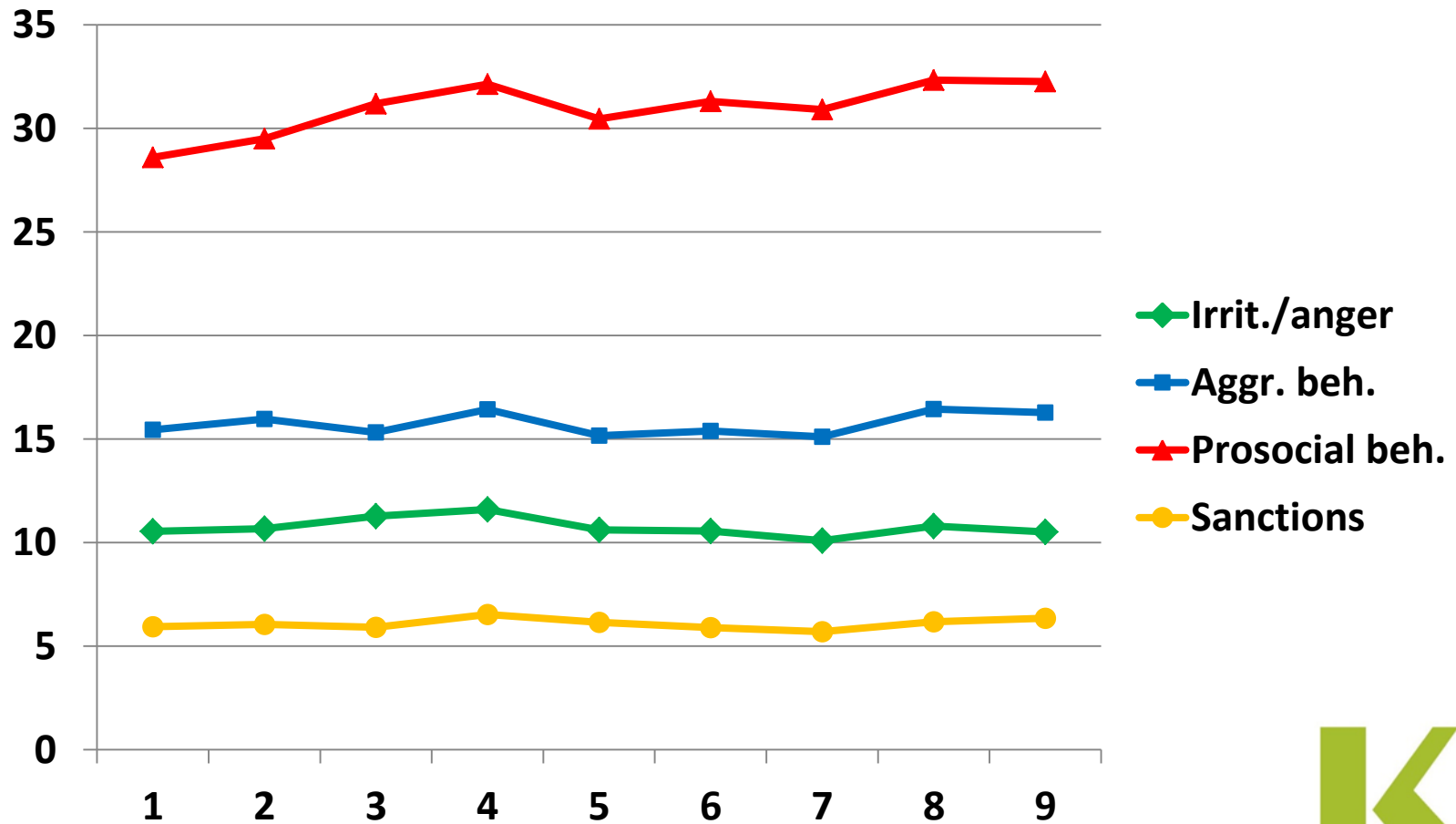
Behavior during the first two years ($N = 178$)



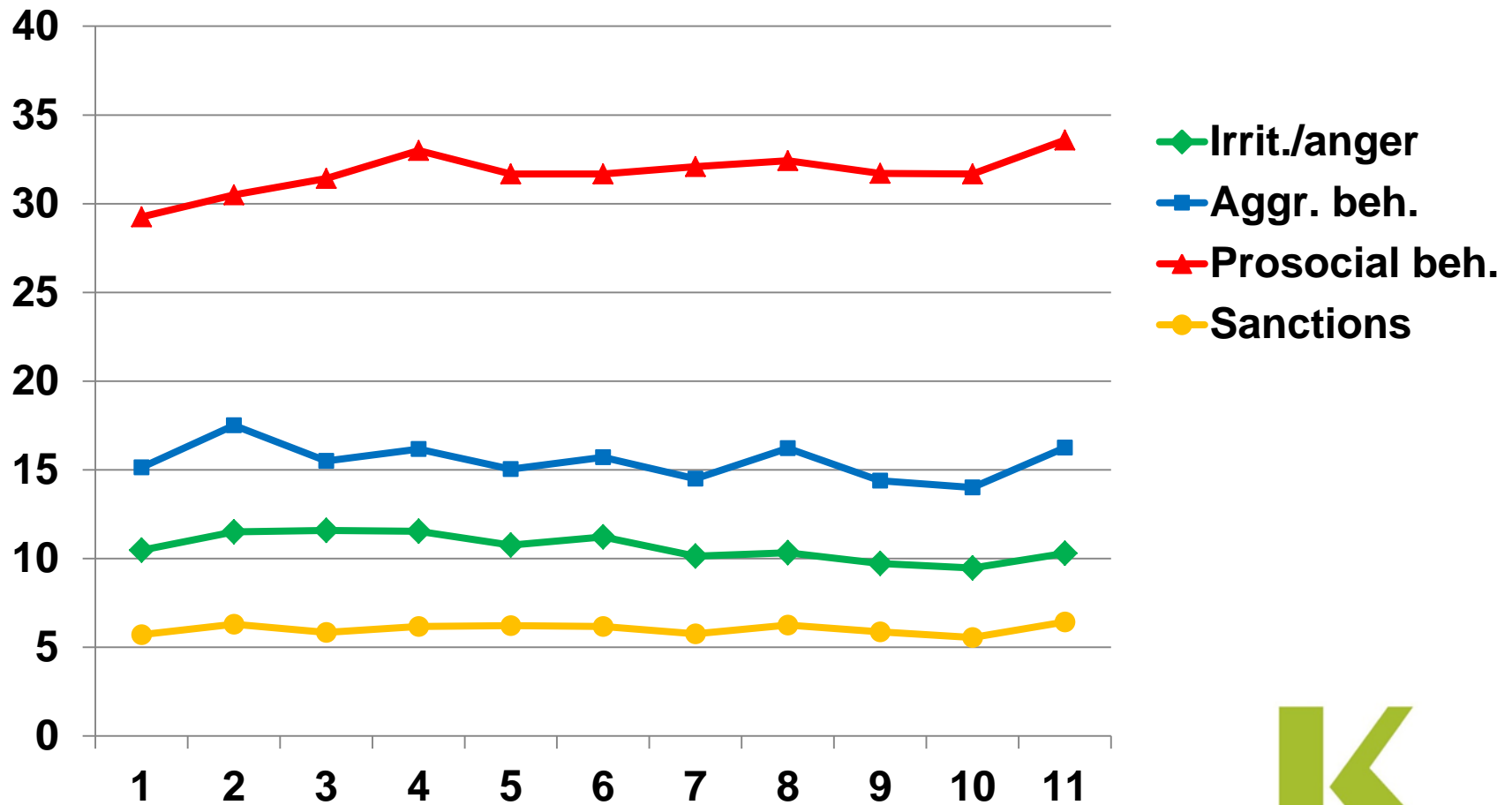
Behavior during the first three years ($N = 115$)



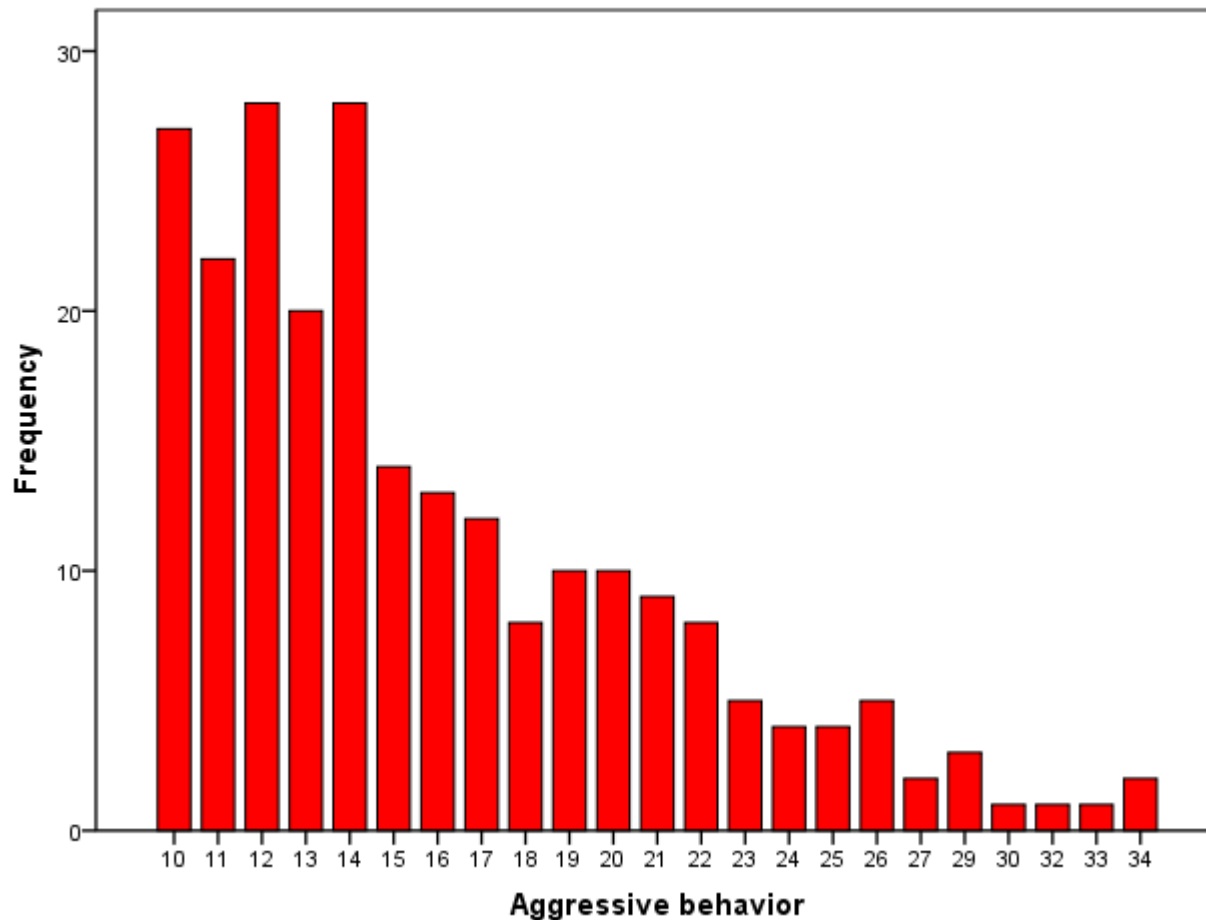
Behavior during the first four years ($N = 70$)



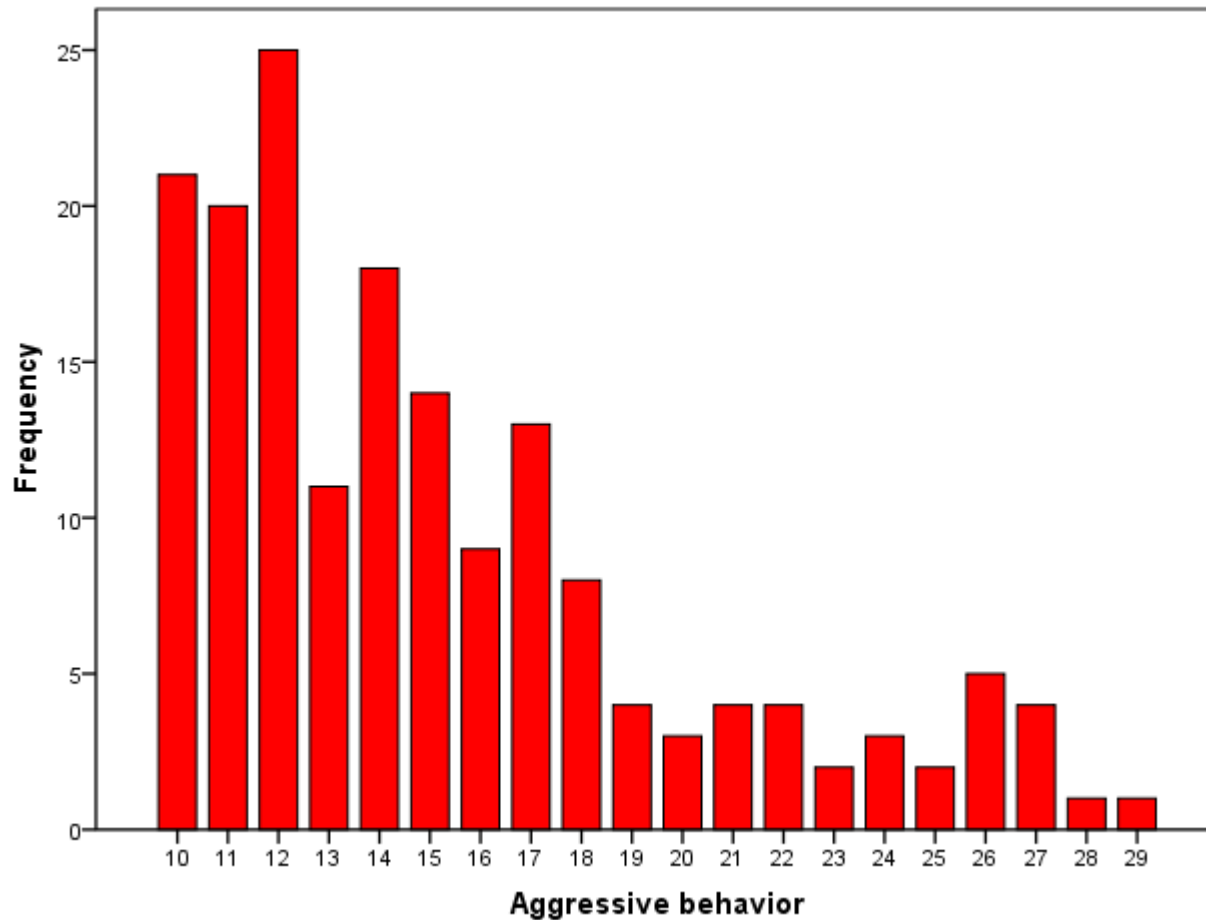
Behavior during the first five years ($N = 24$)



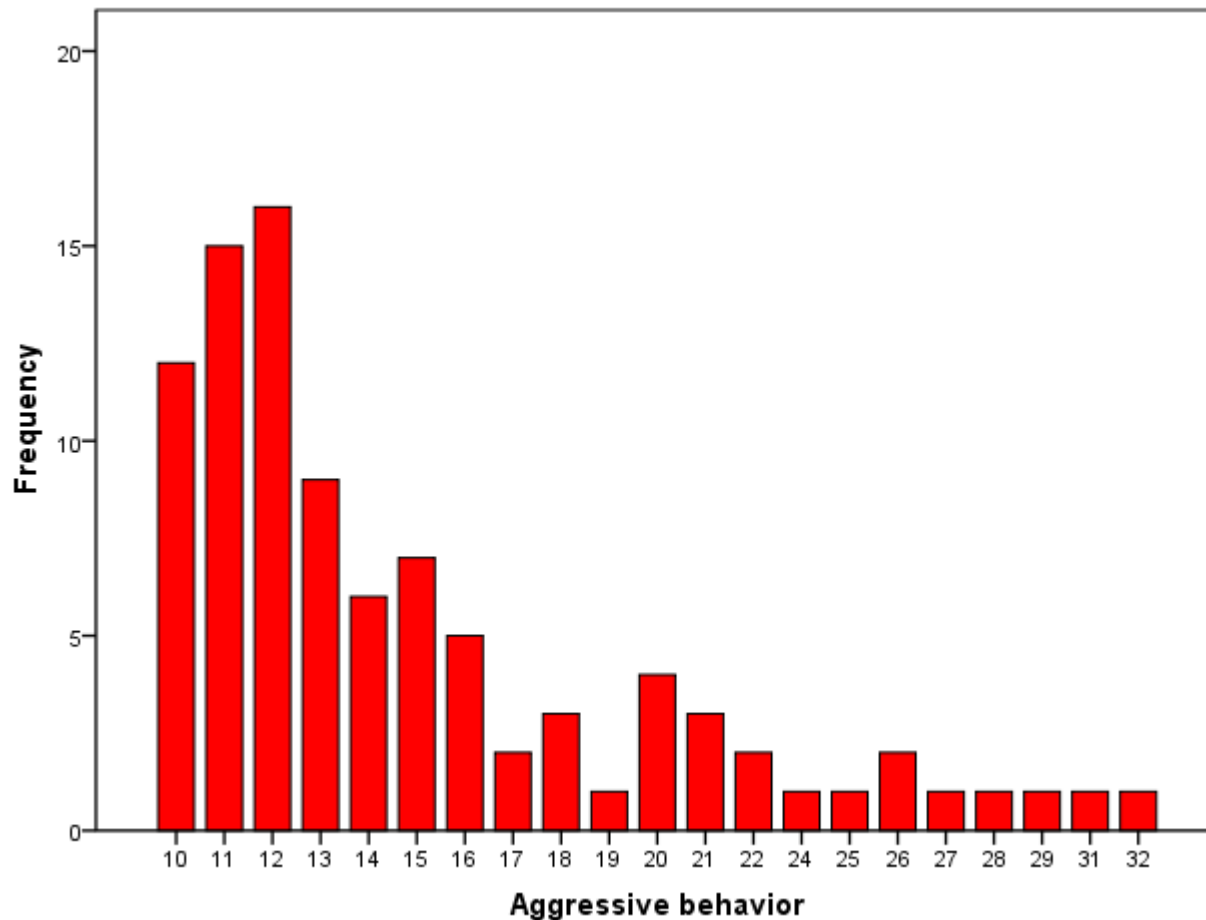
Frequency of aggressive behavior after one year ($N = 236$)



Frequency of aggressive behavior after two years ($N = 178$)



Frequency of aggressive behavior after three years ($N = 115$)



Results

- Repeated measures (MANOVA): Significant decrease in aggressive behavior and significant increase in prosocial behavior during second half year of stay;
- Regression analyses: Factor 2 of the PCL-R predicts decrease in irritation/anger, aggressive behavior, antecedents of aggressive behavior, and sanctions during second half year of stay;
- After one year, after two years, and after three years of stay 60% of the patients score lower than 16 and 75% lower than 19 on aggressive behavior.



Conclusion

- Forensic psychiatric inpatients does not seem to profit from a stay in a hospital longer than two to three years.
- Evaluation of treatment programs is hampered by the low base rate of problem behaviors, such as aggression.
- Risk assessment should not only based on clinical impressions and observation scales, but also on reliable and valid structured interviews and self-report questionnaires.



General conclusion and discussion

- Scores on self-report questionnaires and an observation scale indicate that the structured and controlled environment of a hospital has an attenuating effect on the problem behaviors of forensic psychiatric inpatients.
- A large group of patients can be transferred after two to three years to an rehabilitation unit with intensive control but less structure.
- In a rehabilitation unit risk assessment will be more valid, since this environment is more similar to the place where the patients ultimately will live than a residential setting.

