

# Implicit and Explicit Aggressiveness and the Prediction of Aggressive Behaviour

Rainer Banse & Ilka Fischer  
Humboldt-University Berlin, Germany

Poster presented at the 11th Conference on Personality of the European Association of Personality Psychology - Jena, 21-25 July 2002



The assessment of aggressiveness with explicit questionnaire methods is problematic due to its social undesirability. It therefore seemed promising to adapt the recently developed Implicit Association Test (Greenwald, McGhee, & Schwartz, 1998) to assess the self-concept of aggressiveness at an implicit level. As a validation strategy, we investigated implicit and explicit aggressiveness in ice hockey players and volley ball players.

In line with the sport psychological literature we presumed a self selection of more aggressive individuals into the group of ice hockey players and of less aggressive individuals into the group of volleyball players. The validity of two IAT variants was assessed using group differences, the correlation between implicit and explicit measures, the moderator effect of social desirability, and the prediction of aggressive behavior.

## METHOD



### Sample

Semi-professional **ice hockey players** (N = 50) and **volley ball players** (N = 44) aged 14 to 24 (Mean 16.5).

### Explicit Measures

Explicit aggressiveness (FAF, Hampel & Selg, 1975)  
Social desirability (Crowne & Marlowe, 1960; Stöber, 1999)

### Implicit Measures of Aggressiveness

#### IAT-Trait words

Attribute dimension: Aggressive/peaceful (e.g.; aggressive, provocative - agreeable, peaceful)  
Self-dimension: Me/Not Me (e.g.; I, me, my, self - carpenter, cook, dentist)

#### IAT-Interaction words

Attribute dimension: Aggressive/peaceful (e.g.; threat, hit, fight - discussion, talk, compromise)  
Self-dimension: Me/Not Me (e.g.; I, me, my, self - carpenter, cook, dentist)

### Aggressive Behaviour

Number of matches with penalties out of 40 matches ( $\alpha = .88$ )

Table 1. Task Sequence of the IAT-Interaction

|         |                      |                  |
|---------|----------------------|------------------|
| Task 1: | Aggressive           | Peaceful         |
| Task 2: | Others               | Me               |
| Task 3: | Aggressive or Others | Peaceful or Me   |
| Task 4: | Peaceful             | Aggressive       |
| Task 5: | Peaceful or Others   | Aggressive or Me |

IAT-Score:  $RT_{task\ 3} - RT_{task\ 5}$

## RESULTS

### Reliability

IAT-Interaction: Ice hockey  $\alpha = .86$ , Volleyball  $\alpha = .81$   
IAT-Trait: Ice hockey  $\alpha = .68$ , Volleyball  $\alpha = .79$

### Group Differences

Explicit Aggressiveness: Ice hockey > Volleyball;  $p < .001$   
IAT-Interaction: Ice hockey > Volleyball;  $p < .1$   
IAT-Trait: Ice hockey = Volleyball; n.s.

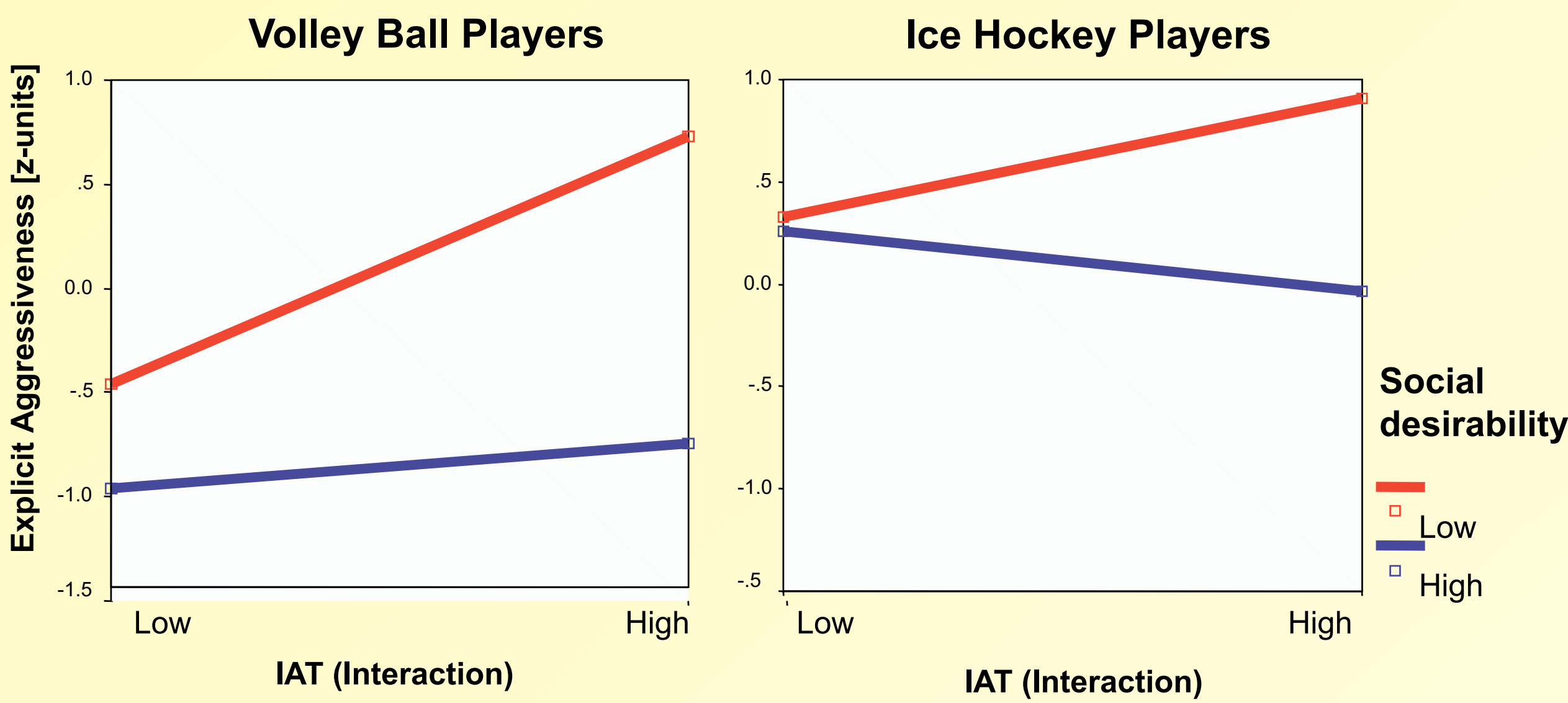


Figure 1. Explicit Aggressiveness as a function of Group, high and low IAT-Interaction, and Social Desirability.

### Moderator Effect of Social Desirability

Explicit aggressiveness showed a significant main effect of Social Desirability (median split), and the expected Social Desirability x IAT<sub>Interaction</sub> interaction effect (Figure 1).

### Implicit-Explicit Correlations (IAT-FAF)

IAT-Interaction: Ice hockey  $r = .02$ , Volleyball  $r = .30^*$   
IAT-Trait: Ice hockey  $r = -.14$ , Volleyball  $r = .44^{**}$

### Prediction of Aggressive Behaviour

Explicit Aggressiveness:  $r = -.16$   
IAT-Interaction:  $r = .35^*$   
IAT-Trait:  $r = .08$

## DISCUSSION

The results provide evidence for the reliability and validity of the IAT using aggressive interaction words as an implicit measure of aggressiveness. However, the results for the IAT using aggressive trait words were not conclusive.

For the IAT-Interaction, significant correlations with the explicit measure of aggressiveness were found for volleyball players, but not for ice hockey players. However, a marginal significant difference between the contrast groups, as well as the expected moderator effect of the social desirability measure indicate criterion and construct validity.

The most convincing validating evidence was provided by the finding that only the IAT-Interaction but not the explicit aggressiveness measure predicted aggressive behaviour.

#### References.

Crowne, D. P. & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology*, 24, 349-354.  
Greenwald, A. G., McGhee, D. E. & Schwartz J. L. K. (1998). Measuring individual differences in implicit cognition: The Implicit Association Test. *Journal of Personality and Social Psychology*, 74, 1464-1480.  
Hampel, R. & Selg, H. (1975). FAF - Fragebogen zur Erfassung von Aggressivitätsfaktoren. Göttingen: Hogrefe.  
Stöber, J. (1999). Die Soziale-Erwünschtheits-Skala-17 (SES-17): Entwicklung und erste Befunde zu Reliabilität und Validität. *Diagnostica*, 45, 173-177.

Supported by:

