

Abstract

Fulfilling the need to belong and achieving common group goals are central group functions ensured in cohesive groups. A combination of these two functions (social/task) with two perspectives on the group (attraction to the group/group integration) results in a four facets model of cohesion (Carron et al., 1985). The instrument GruKo4 (Schürer et al., 2017) assesses these facets in primary school classes using rating scales. Besides, cohesion indicators are often assessed by sociometric data. Since little is known about the relationship between sociometric and psychometric coefficients, we computed coefficients of both types for 46 primary school classes. Despite their conceptual similarity, most cohesion measures correlated weakly at best. Methodological and theoretical explanations are discussed.

COHESION IN PRIMARY SCHOOL CLASSES – Comparison of Sociometric and Psychometric Measures

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COHESION AND ITS EVOLUTION

COHESION DEFINED AS...

...“the resultant of all the forces acting on the members to remain in the group”
(Festinger, 1951; p. 194)



... “the attraction of membership in a group for its members”
(Back, 1951; p. 9)



...“a closeness among members, similarity in perceptions of events, and (...) a bonding together in response to the outside world”
(Evan & Jarvis, 1980; p. 366)



“the tendency for a group to stick together and remain united in the pursuit of its instrumental objectives and/or for the satisfaction of member affective needs”
(Carron, Brawley & Widmeyer, 1998; p. 213)

Sociometric Measures

- Approach to reveal group characteristics, usually compressed in **different coefficients** that are attributed to **capture cohesion**
- These measures proved to be very useful but they **lack of an elaborated theoretical background on cohesion**

	Average degree	Density	Component number	Reciprocity
Description	Average number of children who are considered as playing or working partners	Number of existing relations divided by the maximum possible number of relations	Number of unconnected subgroups in a class	Number of reciprocal relationships divided by all existing relationships in the group
Link to cohesion	It should represent a high attraction to the group	It can represent a strong group integration in terms of a unified, strongly connected group	Cohesion should be best fulfilled if there are less subgroups or better one main group that all members belong to	High reciprocity should lead to a more stable group. While stability is not explicitly included in the 4 facet model, this might be one further aspect

Psychometric Measures

- **INNOVATION:** Transferring concept of cohesion to classes with theoretical background 4 facets of cohesion (Carron et al., 1985)
- Development of an instrument to assess cohesion in school context: „GRUKO4“ (Schürer, Behrmann, van Ophuysen, 2017)

Facets		Theoretical content	Example items	N-Items	α
Attraction to the Group	Social	Attractive classmates and thereby desire for common activities in breaks and leisure time	I like the children in my class.	5	.789
	Task	Attractive group tasks and thereby desire for participation in activities during lessons	I like the task we do during lessons.	5	.769
Group Integration	Social	perception of similarity and connectedness in relation to social extracurricular activities	In my class we all stick together well.	3	.770
	Task	perception of similarity and connectedness in relation to task-related learning activities	My class is a good learning community.	4	.733

TWO APPROACHES – ASSESSING THE SAME?

What is the relation between sociometric and psychometric measures of cohesion?

Empirical Study

The data was reported by **46 primary school classes** (1065 students) of grades 2 und 3 in Germany who participated in the **intervention study “SoPaKo”** to promote class cohesion.

Sociometric Assessment

- Peer-nominations: List with the names of all classmates and marked those with whom they play most or work best
- Different cohesion coefficients for playing and working partner network using the software UCINET (Borgatti, Everett & Freeman, 2002).

Psychometric Assessment

- Using “GruKo4”: Based on 3-5 items, each to be answered on a four-point Likert scale (1 = strongly disagree to 4 = strongly agree)
- All variables proved to be highly reliable (Cronbach’s Alpha > .73)
- Average scores per class were computed

Results

		Average degree	Density	Component number	Reciprocity
Mean (SD)	Social	5.70 (1.38)	.252 (0.06)	4.24 (2.95)	.488 (0.11)
	Task	6.03 (1.44)	.265 (0.06)	4.41 (3.05)	.436 (0.11)
N = 46 primary classes					

Facets		M (SD)
Attraction to the Group	Social	3.50 (0.61)
	Task	3.25 (0.73)
Group Integration	Social	3.32 (0.75)
	Task	3.35 (0.70)

		Average Degree	Density	Component Number	Reciprocity
Attraction to the Group	Social	.157	.168	-.162	.167
	Task	.211	.168	-.213	.062
Group Integration	Social	.071	.237	-.023	.025
	Task	.248*	.373**	-.229	-.091

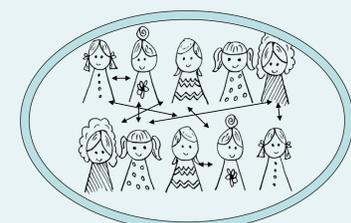
Spearman correlations; *p < .05, **p < .01; one-tailed test

Conclusion

- In total: Correlation coefficients numerically rather low + most non-significant
- Highest: **Density**
- Stronger relations in group function “task” than “social”
- All correlations in expected direction
- Explanation low coefficients:
 - a) psychometric + sociometric focus different perspectives
 - b) psychometric data is skewed & variability of group means rather low
 - zero-correlation for Reciprocity → focus on mutual nominations, maybe not mapped by 4-facet model of Carron et al. (1985)
 - Mutual relationships as indicator of friendship and social participation = a possible third relevant perspective on group cohesion (alongside group integration + attraction to the group)

References

Back, K.W. (1951): Influence through social communication. The Journal of Abnormal and Social Psychology, 46(1), 9-23.
Borgatti, S.P., Everett, M.G. and Freeman, L.C. (2002): Ucinet 6 for Windows. Software for Social Network Analysis. Harvard, MA: Analytic Technologies.
Carron, A.V., Brawley, L.R. & Widmeyer, W.N. (1998). The measurement of cohesiveness in sport groups. In J.L. Duda (Hrsg.), Advances in sport and exercise psychology measurement (S. 213-226).
Carron, A.V., Widmeyer, W.N. & Brawley, L.R. (1985): The development of an instrument to assess cohesion in sport teams. The group environment questionnaire. Journal of Sport Psychology, 7 (3), 244-266.
Evans, N.J. & Jarvis, P.A. (1980): Group Cohesion. Small Group Behavior, 11 (4), 359-370.
Festinger, L. (1950): Informal social communication. Psychological Review, 57 (5), 271-282.
Schürer, S., Behrmann, L. & van Ophuysen, S. (2017). Differenzierte Erfassung der Gruppenkohäsion in Schulklassen der Grundschule und der Erprobungsstufe - Validierung eines standardisierten Erhebungsinstrumentes, Münster.



SoPaKo website

