GDQ®
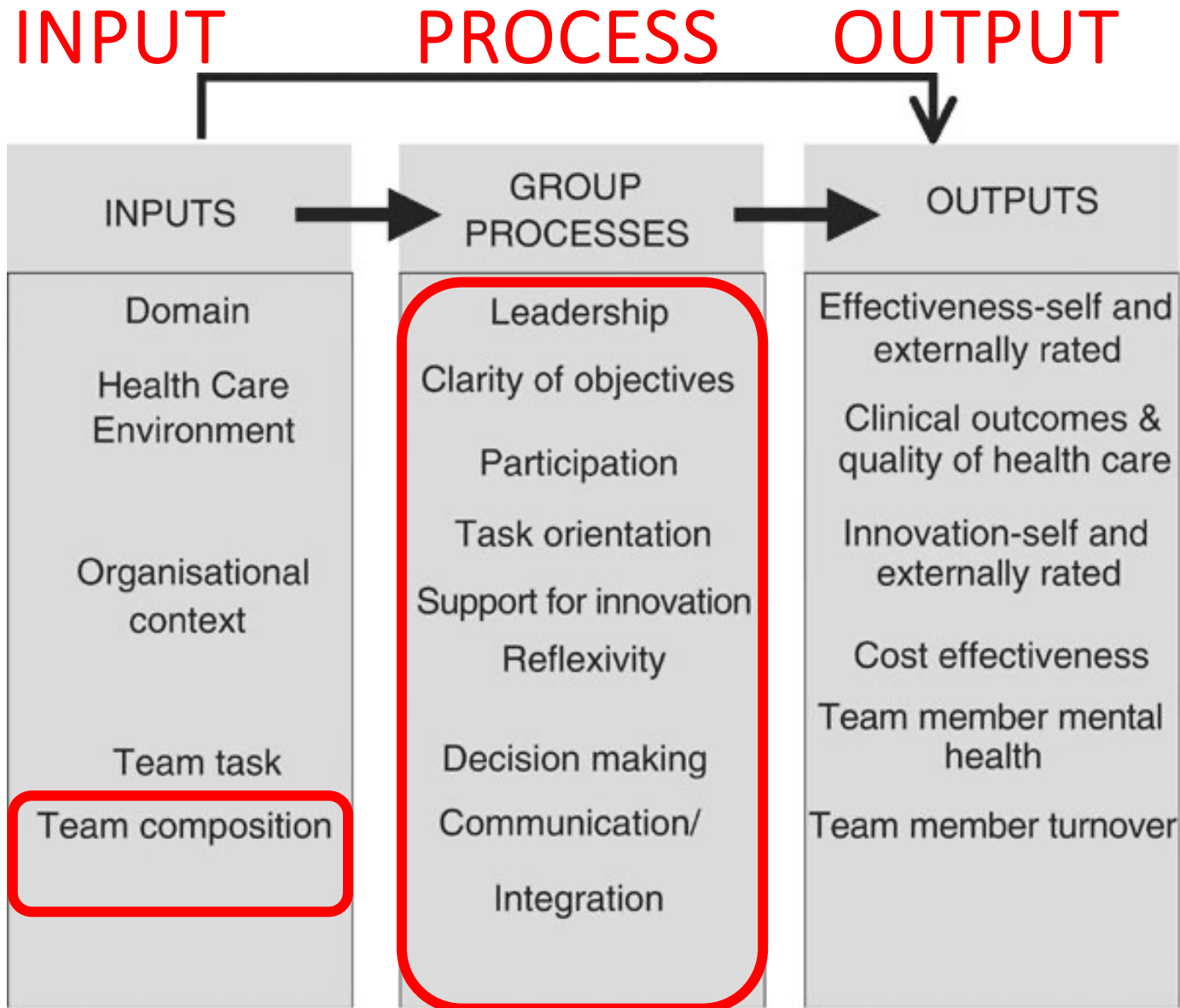
The differences in group processes between large and small goups

Christian Jacobsson
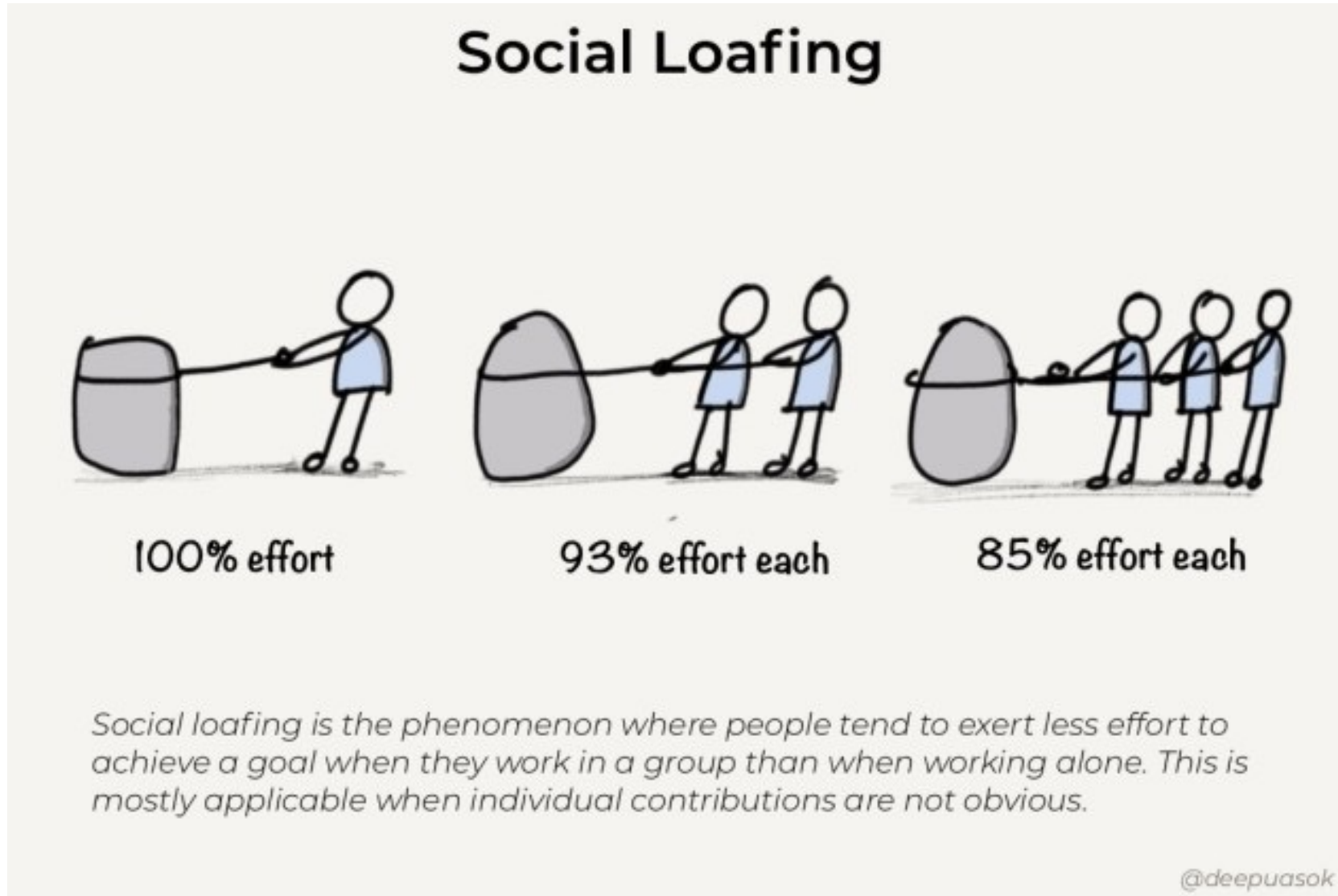GDQ Seminar, 2023-09-21

Background

- The significance of group size has been studied for a long time. Hare (1981) mentioned observational studies that are about 130 years old.
- Group size has almost only been studied on an overall level, the number of members and how effective they cooperate, their goal attainment in different regards.
- The common knowledge is that "small is beautiful", smaller groups usually perform better than larger ones.

- Research has been occupied with the input (e.g. size) and output (effectiveness) with regard to the **I**nput – **P**rocess – **O**utput model (IPO).
- Very little interest has been shown to the **Process** of large and small groups.

IPO. The focus of this study, input and process

The Ringelmann effect – a classic explaination

Social Loafing

100% effort

93% effort each

85% effort each

Social loafing is the phenomenon where people tend to exert less effort to achieve a goal when they work in a group than when working alone. This is mostly applicable when individual contributions are not obvious.

@deepuasok

The average number of members in groups in different stages (GDQ) (n=764 groups)
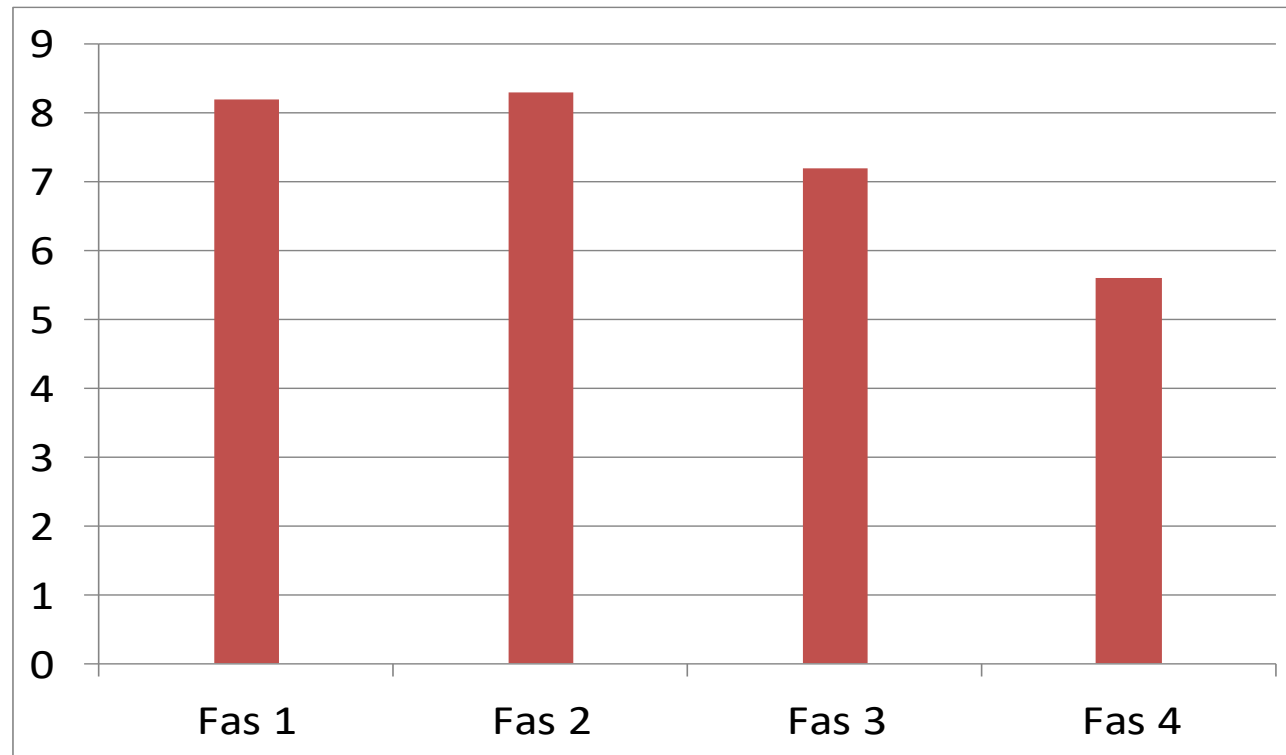
The percentage of effective teams, stage 4, with different sizes (n 127 stage 4 teams, Swedish norm data)
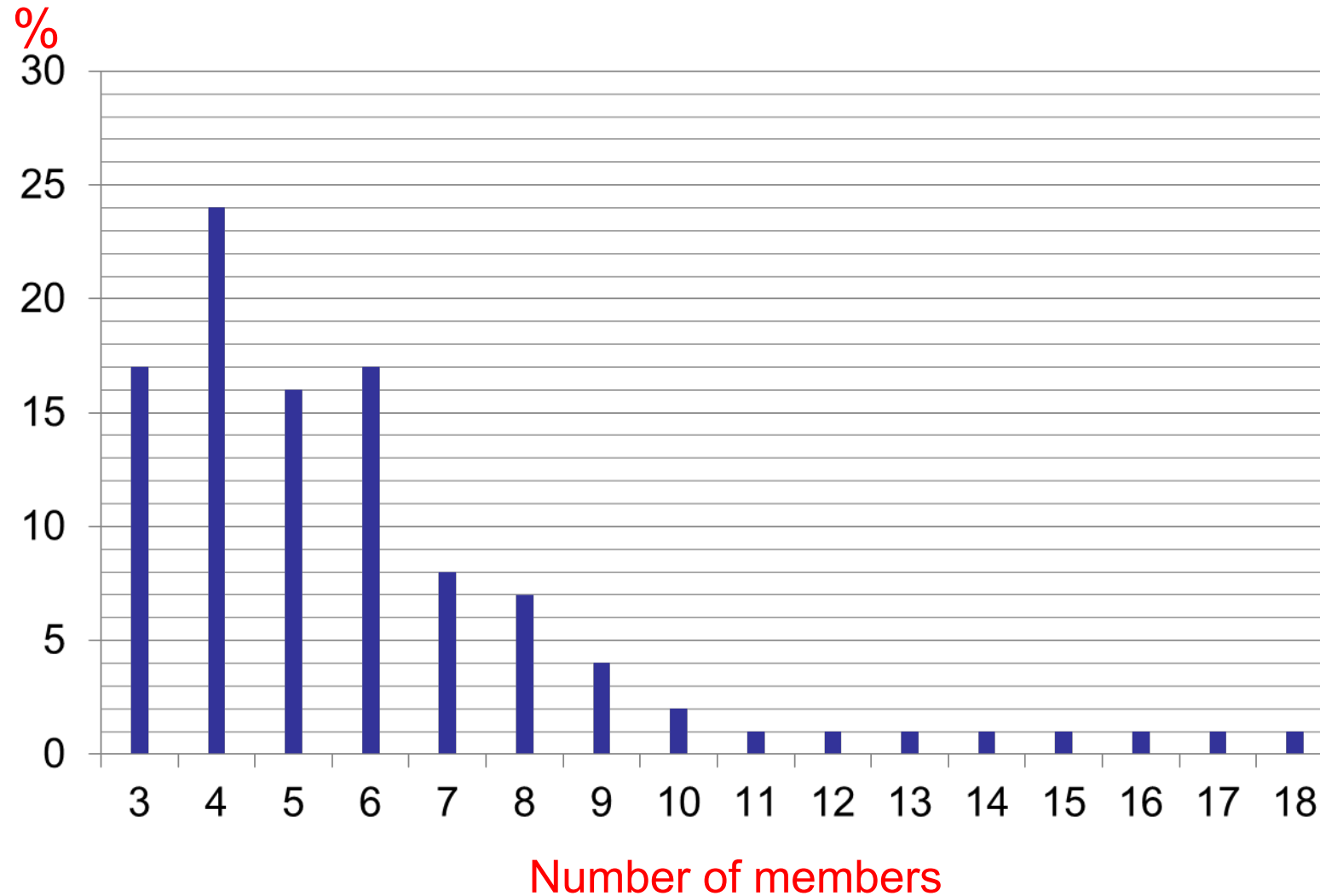
Research question

- In what ways does team processes differ beteen large and small groups?

Respondents and statistical analyzes, 3-8 compared to 9-18 members

- GDQ data collected between 2008-2018
- Respondents from 23 countries who answered the GDQ in three languages, English (84%), Norwegian (8%) and Swedish (8%)
- 3970 respondents, 3484 followers and 486 leaders
- 486 teams with an average group size of 8.17 individuals including the leader
- 51.6% men and 48.4% women
- **Group size were categorized into:**
- **Small (3-8 members), and**
- **Large (9-18 members)**

- Two different types of statistical analyzes were carried out
- **(1)** The first analysis was to investigate the relationship between the group's mean score in the different GDQ scales and the difference between large and small groups

- (2) In the second analysis, large and small groups were compared in how they answered the GDQ on an item-lewel (60 items)

Results, GDQ scales 1-4, largest effect size on scale 2

Table 1

Resultat (skalor 1–4) av t-test för oberoende stickprov mellan små grupper (< 9) och stora grupper (≥ 9).

Not. Riktlinjer för tolkning av effektstyrka enligt Cohens d: 0.20 – 0.49 = liten, 0.50 – 0.79 = måttlig, ≥ 0.80 = stor (Borg & Westerlund, 2012).

GDQ Scale (1–4)	Small groups < 9 (N = 2472) M (SD)	Large groups ≥ 9 (N = 3119) M (SD)	t(5589)	p	d
1	41.055 (6.418)	42.605 (6.083)	-9.176	<0.001	-0.249
2	36.404 (9.516)	38.894 (8.974)	-9.963	<0.001	-0.270
3	54.449 (8.003)	52.939 (7.795)	7.108	<0.001	0.191
4	56.994 (8.394)	55.037 (8.241)	8.749	<0.001	0.236

Results, item level   **43 out of 60 items** showed a significant difference!

GDQ I		GDQ II		GDQ III		GDQ IV	
Inclusion & Safety Concerns		**Fight**		**Structure**		**Effective Organization**	
1. Tentative & polite		2. Very different views		3. Goals are not clear		4. Not able to delegate	
13. No expressed conflict		6. Different opinions about goals		7. Not working on strategies for goal achievement		8. Not accomplishing some goals	
17. Some don't talk much		22. Split on issues		11. Members not taking responsibility		12. Not getting, giving, using feedback	
29. Safety concerns		34. Arguments		15. Not planning		16. Assignments not based on ability	
33. Being liked		38. Not cooperative		19. No progress in getting organized		20. No good method for decision making	
37. Hesitate to express different views		54. Can't make decisions		31. Not able to form subgroups to work on tasks		24. Decisions not participatory	
49. Doesn't feel like a group		58. Power struggles		43. No team work		28. Decisions not implemented	
Dependency Issues		**Negative Emotions**		51. Not handling conflict well		**Culture/Norms/Values**	
5. Leader dependence		10. Expressed frustration with group		**Trust/Cooperation/Positive Emotions**		32. No norms for high performance and quality	
9. Wants leader to direct		14. Discomfort with their role		23. Not cooperating with group decisions		36. Success not expected	
21. Go along with member suggestions		50. Tension in group		27. Not accepting of member initiatives		40. Innovation/creativity not encouraged	
25. Address same few people		**Counter-dependency**		35. Trust is not high		44. No attention to detail	
Lack Of Structure		18. Members challenge leader's ideas		39. Not satisfied with group progress		56. Commitment to task not high	
41. Time spent socializing		46. Some support leader, others don't		47. Cohesive but not productive		60. No support and reward for member contributions	
45. Not discussing goals		**Signs of Emergent Structure**		**Leader As Resource**		**External Relations**	
53. Role assignments unclear and not discussed		26. Subgroups or cliques		55. Leader not seen as asset		48. Poor relations with other groups	
57. No subgroups or cliques		30. More participation but not cooperative		59. Ask for leader advice when not necessary		52. No access to needed technical and human resources	
		42. Some attempts to resolve differences					

Table 3. *Significant items and their subscales (in Swedish).*
= d > 0.20

Skala	Subskala	Item
1	1. Tillhörighets- & trygghetsfrågor	1, 17*, 29, 37*, 49
1	2. Beroendefrågor	25
1	3. Brist på struktur	45
2	4. Konflikt	2, 6*, 22*, 34, 38*, 54*, 58
2	5. Negativa känslor	10, 14, 50
2	6. Motberoende	46
2	7. Tecken på framväxande struktur	26*, 30*
3	8. Struktur	3, 11, 15, 19, 43*, 51
3	9. Tillit/samarbete/positiva känslor	23, 27*, 35*, 39
3	10. Ledare som resurs	55
4	11. Effektiv organisation	4, 12, 16, 20*, 24*, 28
4	12. Kultur/normer/värden	32, 40, 44, 60
4	13. Externa relationer	48, 52

Table 4 - *Signifiicant items with larger effect size, d = ≥ 0.2. (in Swedish)*

Item	Skala (1–4)	Små grupper < 9 (N = 2472) M (SD)	Stora grupper ≥ 9 (N = 3119) M (SD)	d
6. Medlemmarna verkar ha olika åsikter om gruppens mål	2	2.55 (0.903)	2.73 (0.920)	-0.200
17. En del medlemmar i gruppen säger inte så mycket under våra möten	1	2.84 (0.998)	3.22 (0.971)	-0.391
20. Gruppen har en bra metod för beslutsfattande	4	3.45 (0.929)	3.23 (0.931)	0.230
22. Gruppen verkar splittrad i ett antal frågor	2	2.57 (0.938)	2.79 (0.942)	-0,229
24. Gruppens beslutsfattarmetoder bygger på delaktighet	4	3.81 (0.856)	3.60 (0.881)	0.236
26. Medlemmarna gaddar ihop sig i olika grupperingar	2	2.39 (1.157)	2.68 (1.145)	-0.255
27. När enskilda medlemmar vill pröva något nytt verkar gruppen accepterande	3	3.70 (0.804)	3.53 (0.815)	0.210
30. Fler medlemmar deltar i gruppdiskussioner men vi är inte en samverkande grupp ännu	2	2.71 (1.032)	2.98 (0.975)	-0.272
35. Tilliten är hög i gruppen	3	3.73 (1.011)	3.52 (0.994)	0.214
37. Medlemmar tycks tveka att uttrycka en avvikande åsikt	1	2.35 (0.880)	2.56 (0,908)	-0,239
38. Medlemmarna verkar inte särskilt samarbetsinställda	2	2.01 (0.880)	2.19 (0,898)	-0,206
43. Vi kan förlita oss på varandra. Vi arbetar som ett team	3	3.81 (0,962)	3.60 (0.945)	0,212
54. Vi tycks inte kunna fatta beslut i den här gruppen	2	2.06 (0,921)	2.26 (0,946)	-0,216

Results, item level **13 items with larger effect sizes**!

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Conclusions

- Most of the differences are in scale 2, corresponding to stage 2, and "fight" (konflikt), were larger groups have more conflicts
- Some differences were also shown in scale 1, for instance "some don't talk much", this could be seen as natural but also call for more work in subgroups when it comes to larger groups
- Also participation seem to be a dividing point between sizes, less in larger groups

In conclusion:

On a general basis, two general areas need to be considered in larger groups.

- Participation in meetings and if members really participate (talk).
- How decisions are made (is the way accepted?)

In addition…

Does large team use the possibility to work in subgroups, taking care of different tasks for the larger group?

Welcome back 19th of September 2024, 13.00-16.00