



QMSS2 SUMMER SCHOOL

**ROMANTIC RELATIONSHIPS
IN THE FRIENDSHIP NETWORK
OF ADOLESCENTS**

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Motivation

- The study of attitudes and behaviours regarding romantic and sexual relationships – an integrant component in determining the proximate factors of population dynamics
- Romantic and sexual behaviour (RSB) – important consequences on the public and private health
- The debut of the romantic and sexual life – a benchmark of the transition to the adulthood
- Focus on the heterosexual behaviour of adolescents – tight with the reproductive behaviour

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Some theoretical considerations

- Friendship networks in adolescence (FNA) -- key concept of the human development during the life-course (Hartup 1996).
- Adolescents living in a socially isolated position are exceptions (Ennet & Bauman 1996);
- FNA are marked by fluctuations:
 - in the level of gender segregation within the network,
 - in the development of affiliation relationship with the opposite sex friends and with romantic partners (Billari & Mencarini 2003).
- Friendship with opposite sex peers in adolescence -- different meaning for girls and boys (Mussong 2000).
- FNA are more gender balanced than FN in childhood, and the opposite sex provide a reservoir for potential romantic partners (Feiring 1999).

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Methodology of research (1)

Data obtained from **The Teenage Friends and Lifestyle Study (TFLS – 1995-1997)**;

A cohort of **160 pupils** investigated, **129** of whom present at all **3 measurement points**;

Pupils were followed over their **second, third and fourth year** at a **secondary school in Glasgow**;

The **friendship networks** formed by allowing the pupils to name **up to 6 friends**;

Data about **smoking attitudes and behaviour**, elements of their **lifestyle**, including **substance use and leisure activities** included.

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Methodology of research (2)

Perspective of analysis:

Interdependence of networks and behaviour



Working hypothesis:

1. Does having a romantic relationship quantitatively decrease the interactions with the other friends?
2. Does having more friends increase the probability to initiate a romantic relationship?
3. What is the role played by tobacco, alcohol, and cannabis consumption in both romantic relationship dynamics and friendship evolution?

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Methodology of research (3)

Constant variable: gender

Control variables: tobacco, alcohol, cannabis

Analysis:

Co-evolution models for networks and behaviour

Statistical package used for data analysis:

RSiena07

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Descriptive statistics

Network density indicators:

observation time	1	2	3
density	0.027	0.027	0.028
average degree	3.473	3.450	3.597

Tie changes between subsequent observations:

periods	0 => 0	0 => 1	1 => 0	1 => 1	Distance	Jaccard
1 ==> 2	15827	237	240	208	477	0.304
2 ==> 3	15839	228	209	236	437	0.351

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Network Dynamics

	Estimate	S.E.	t-stat
1. rate constant friendshipall rate (period 1)	11.0326	(0.9118)	0.0107
2. rate constant friendshipall rate (period 2)	9.0908	(0.9283)	0.0079
3. eval outdegree (density)	-2.7852	(0.2027)	0.0956
4. eval reciprocity	2.2028	(0.1140)	0.0748
5. eval transitive triplets	0.6751	(0.0478)	0.0359
6. eval 3-cycles	-0.4495	(0.0922)	0.0369
7. eval indegree - popularity (sqrt)	-0.2941	(0.0879)	0.0477
8. eval sexF alter	-0.1509	(0.1085)	0.0363
9. eval sexF ego	0.1126	(0.1081)	0.0165
10. eval same sexF	0.8876	(0.1069)	0.0717
11. eval tob alter	0.0447	(0.1171)	0.0741
12. eval tob ego	0.1130	(0.1067)	0.0762
13. eval tob similarity	0.1544	(0.0986)	-0.0127
14. eval alc alter	-0.3885	(0.3075)	0.0639
15. eval alc ego	-0.2947	(0.3222)	-0.0004
16. eval alc similarity	0.4428	(0.3325)	0.0553
17. eval can alter	0.0640	(0.0865)	0.0047
18. eval can ego	-0.0654	(0.0841)	0.0156
19. eval can similarity	0.1436	(0.0761)	0.0384

Behavior Dynamics

	Estimate	S.E.	t-stat
20. rate rate romanticall (period 1)	1.1849	(0.3282)	0.0000
21. rate rate romanticall (period 2)	2.0709	(1.5616)	0.0051
22. eval behavior romanticall linear shape	-1.3891	(0.2602)	0.0245
23. eval behavior romanticall: effect from sexF	0.9298	(0.5134)	-0.0321
24. eval behavior romanticall: effect from tob	1.3215	(0.9059)	-0.0193
25. eval behavior romanticall: effect from alc	-1.7815	(1.3514)	-0.0079
26. eval behavior romanticall: effect from can	0.4980	(0.8226)	0.0221

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For the future

- deepening the analysis by including other effects (e.g., **gender & romantic**) + GoF
- trying to test other hypothesis (e.g., **the extend in which having opposite sex friends is linked to the probability of having a romantic relationship**)
- intending to gather our own data, including a module related to the **sexual behaviour** (same sex romantic partnership)

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Thanks

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