Direct and indirect peer influence of adolescent non-suicidal self-injury:
The role of friends' depressive symptoms and impulsivity

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INTRODUCTION

Peer influence research has extensively shown that friends' behaviors affect adolescents' behaviors.

However prior work

a) Examined peer socialization almost exclusively in relation to externalizing problems

b) Adopted a unique model of peer socialization (i.e., 'modeling paradigm'), according to which friends' behavior X predict adolescents' engagement in the same behavior X (Brechwald & Prinstein, 2011)

The present study aimed to expand this area of research by

a) Examining peer influence in relation to an understudied form of extreme behavior: *nonsuicidal self-injury (NSSI)*

b) Testing *indirect* forms of *peer influence*; that is, the effects of a certain friend's behavior Y (i.e., impulsivity and depressive symptoms) on an adolescents' related behavior X (i.e., NSSI)

Thus, direct and indirect peer influence effects were estimated in relation to adolescent NSSI within school friendship networks.
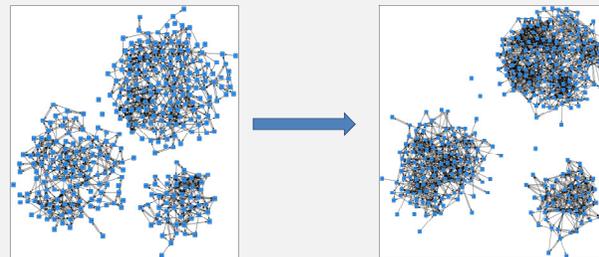
METHOD

Sample: 348 adolescents (55% female; M_{age} = 15.02; SD = 0.53) from three high schools located in a rural community in the Southeast U.S. Survey were administered every six months from the spring of the 9th grade to the fall of the 11th grade.

Measures: Adolescent NSSI and depressive symptoms were collected at each time point through self-report measures. At baseline, a self-report measure of impulsivity was also assessed. An unlimited grade-wide peer nomination procedure was used to identify adolescent friendships.

Strategy of analyses: Stochastic actor-based models (Snijders, van de Bunt, & Steglich, 2010) were employed to estimate direct and indirect peer influence effects across the four time points.
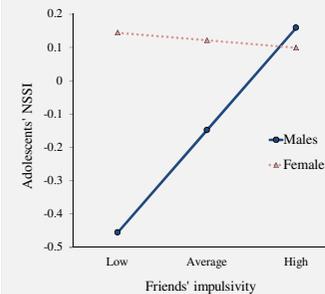
STOCHASTIC ACTOR-BASED MODELING

Graphical representation of three school friendship network across two time points

Parameter estimates for stochastic actor-based models of friendship network and adolescents' NSSI

PARAMETERS	Direct NSSI socialization		Indirect NSSI socialization	
	ESTIM.	S.E.	ESTIM.	S.E.
Network dynamics				
NSSI similarity	-.06	.07	-.09	.07
Impulsivity similarity	–	–	.16	.10
Depression similarity	–	–	.13	.09
NSSI dynamics				
Linear shape	-3.30***	.20	-3.24***	.20
Quadratic shape	1.61***	.15	1.47***	.16
Average alters (direct socialization)	.19	.41	-.33	.64
Gender	.39*	.18	.27	.18
Impulsivity	–	–	.24	.17
Depression	–	–	.48*	.21
Friends' impulsivity	–	–	.26	.27
Friends' impulsivity * Gender	–	–	1.10*	.56
Friends' depression	–	–	.96**	.35
Fiends' depression * Gender	–	–	.49	.68

Note. All models controlled for a number of network structural effects: reciprocity, transitivity triplets, 3-cycles, number of actors at distance two.

CONCLUSIONS

No evidence was found for *direct peer influence* of NSSI: friends' NSSI did not predict increases in adolescent NSSI over time.
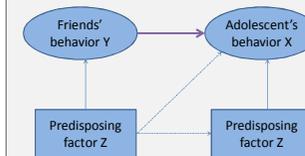
Yet, evidence for *indirect peer influence* emerged:

a) friends' depressive symptoms influenced adolescents' NSSI among both male and female adolescents
b) friends' impulsivity influenced adolescents' NSSI among male adolescents

Findings support the hypothesis that peer influence extends beyond the commonly adopted 'modeling' paradigm to more indirect forms.

What are the potential patterns underlying indirect peer influence?

1. Common predisposing psychological characteristic underlying both friends' behavior Y and adolescent's behavior X

2. Person-environment model: friends' behavior Y (i.e., risk environment) interacts with adolescent's specific vulnerability in predicting adolescent's behavior X