

**PSYCOM – A pilot study on associations between affective  
psychopathic traits, neighborhood factors and risk behaviors in  
the community**

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## **Introduction**

This pilot study is part of the larger umbrella project PSYCOM that aims to investigate prevalence, and external correlates of affective psychopathic traits in different community groups. The pilot study was conducted to assess the feasibility of a methodological approach that we aimed to use in a larger follow up-study. Given the markedly low response rate (21.4%), this brief report emphasizes the methodological approach, with limited focus on the outcomes.

## **Brief theoretical background**

There is increased research interest for investigating affective and interpersonal psychopathic traits (e.g., callousness, fearlessness, superficial charm, grandiosity) outside of criminal settings (Lilienfeld, Latzman, Watts, Smith, & Dutton, 2014; Miller & Lynam, 2014). To date, however, there is only limited research on psychopathic traits in representative community samples (Gao & Raine, 2010). An improved understanding of associations between psychopathic traits and different risk behaviors in different settings, will inform the design of future prevention and treatment strategies (Skeem, Polaschek, Patrick, & Lilienfeld, 2011). Some personality features, such as absence of empathy and deficient fear responding could make individuals more likely to connect with deviant peers, or engage in violent or antisocial behavior (Kimonis, Frick, Munoz, & Aucoin, 2008). Developmental research on psychopathic traits has proposed that socioeconomic and environmentally based (e.g., family factors, education, prosocial networks) factors might influence the expression and implications of elevated psychopathic traits (Patrick, Fowles, & Krueger, 2009). There is little knowledge, however, about associations between psychopathic traits, socioeconomic factors and residential context.

During the last decades, researchers are increasingly investigating dynamic, social processes as important dimensions of residential context. It remains largely unexplored,

however, how different dimensions of neighborhood factors, encompassing *structural aspects* (e.g., poverty, high residential turnover, ethnic heterogeneity) and *dynamic social processes* (e.g., presence of social norms, neighborhood trust, level of safety and violence) operate and interact (Diez Roux, & Mair, 2010). One key aspect of dynamic neighborhood processes, which is increasingly investigated, is degree of collective efficacy (Sampson, Raudenbush, & Earls, 1997). Collective efficacy reflects the willingness of residents to work towards collective goals and respond to signs of physical disorder (e.g., vandalism, litter, burned out buildings) (Sampson et al., 1997). Degree of collective efficacy has been proposed to vary between deprived and affluent neighborhoods (Morenoff, Sampson, & Raudenbush, 2001).

### **Study aim**

This pilot study is part of the larger umbrella project PSYCOM, which aims to investigate prevalence, and external correlates of affective psychopathic traits in different neighborhoods. The pilot study was conducted to assess the feasibility of a methodological approach that we aimed to use in a larger follow up-study.

### **Method**

#### **Participants and setting**

Addresses for males ( $N = 300$ ) were sampled from four pairs of neighborhoods in Stockholm, distinguished based on postcode intervals. Each pair of neighborhoods were located in close geographic proximity, however differed with respect to census based socioeconomic status (SES) variables retrieved from the local municipality statistics office (i.e. number of foreign born inhabitants, educational level, number of unemployed inhabitants, average income, number of days with sickness benefit, and number of inhabitants receiving social assistance). Number of inhabitants within each neighborhood ranged from 7,400 – 22,900 ( $M = 13,530$ ,  $SD = 4947$ ). The randomized sampling of addresses was conducted by the Swedish Tax Agency (SPAR; Statens Personadressregister). The SPAR

register is continuously updated with data from the Swedish population and it includes addresses for all individuals who are registered as residents in Sweden.

Ten subjects were excluded due to incorrect addresses ( $n = 8$ ) and failure to send out the invitation letter ( $n = 2$ ). In total therefore, 290 individuals were invited to participate in the study. The overall response rate was 21.4%. The final sample consisted of 62 individuals between 18-41 years of age ( $M = 29$  years,  $SD = 6.88$ ). The majority of participants ( $n = 35$ , 60.3%) resided in low SES neighborhoods and the study sample was highly ethnically diverse. Most participants ( $n = 40$ , 64.5%) were born in Sweden, however almost a third of the participants ( $n = 17$ , 27.4%), originated from countries outside of Europe. The majority of the foreign born participants had lived in Sweden for more than 10 years (range 2-37 years). For further information about the study subjects, see Table 1.

## **Procedure**

Data collection was conducted during a three-month period in spring 2012. In the first wave of data collection, an invitation letter was posted to all subjects in the sampling pool. The invitation letter contained a brief description of the study as well as personal user-id and password to log into the web survey. To investigate the potential effect of incentives on response rates, we included a cinema voucher in every 6<sup>th</sup> envelope. Approximately two weeks following study invitation, a first reminder was sent out to all non-respondents. This reminder contained the same invitation letter with the personal log in details for the web survey. Approximately three weeks following the first reminder, a second reminder was sent out to every 5<sup>th</sup> non-respondent. The reason that only a subset of the sample received a second reminder was due to financial reasons. The second reminder contained the invitation letter with the log in details for the web survey; however it also contained a paper version of the survey along with a return envelope.

Most participants completed the survey online. Seven participants returned the paper version of the survey, out of which four individuals did not fill in their personal codes. It therefore remains unknown whether they reside in high or low SES neighborhoods. Participation was voluntary and confidential. The Regional Ethics Committee approved the study (2011/1145-31/5). All participants provided written informed consent, online as a mandatory part of the web survey, or in paper format for participants who completed the paper version of the survey.

## **Measures**

The survey covered a range of topics including demographics, socioeconomic status, collective efficacy, violent behavior and victimization. For a detailed description of the measures, see below. The survey took approximately thirty minutes to complete. It was programmed in Internet Border Technologies, and maintained on a secure web site to ensure that respondent data was safely transmitted.

**Demographic Information.** Participants were asked basic demographic questions (e.g. age, country of origin, civil status, educational level, occupation and monthly average income).

**Neighborhood factors and social capital.** This section encompassed general questions about current living situation (e.g., number of years the individual had resided in the area, type of housing) but also more general perceptions of the neighborhood (e.g., regarding safety, frequency of property damages). Most questions were retrieved from Statistics Sweden's *Survey on Swedish living conditions* (ULF). This section also encompassed a measure of collective efficacy (Sampson et al., 1997) which has been denoted the "gold standard" of assessing neighborhood social processes (Odgers et al., 2009). The measure encompasses two subscales: *social cohesion* and *informal social control* where participants are asked to rate the degree to which they agree (coded from 4 = *strongly agree* to 1 =

*strongly disagree*) with a number of statements (e.g., “people around here are willing to help their neighbors”; “people in this neighborhood can be trusted”). Finally, this section also encompassed several questions on social capital (e.g., civic activities, degree of confidence in the Swedish judicial system, voting in the last election).

**Violence.** Questions about violence were adapted from the ULF survey. Participants were asked (a) whether they had been subjected, or subjected anyone else, to threats or violence over the last 12 months. This section also encompassed follow-up questions (e.g., frequency, relation to the perpetrator/victim, whether the violence required any medical care, where the incident occurred, whether alcohol or drugs were involved). In a few cases, participants denied having subjected anyone to threats or violence, however they provided answers to the follow up questions about the incidents. In these cases, responses were re-coded to include these participants in the pool of subjects who had conducted violent behavior.

**Substance use.** Selected questions about substance abuse (e.g., frequency of alcohol consumption, amount of alcohol consumption, frequency of drug use) were retrieved from the Alcohol Use Disorders Identification test (AUDIT; Babor, Higgins-Biddle, Saunders, & Monteiro, 2001) and the Drug Use Disorders Identification Test (DUDIT; Saunders, Aasland, Babor, De la Fuente, & Grant, 1993).

**Affective psychopathic traits.** Three subscales were retrieved from the Psychopathy Personality Inventory-Revised (PPI-R; Lilienfeld & Widows, 2005), which is a self-report measure of psychopathic traits that has been extensively researched internationally (Derefinko, 2014). The subscales were: the 14-item *Fearlessness* scale (which assesses lack of anxiety, eagerness to engage in risk activities); the 13-item *Stress Immunity* scale (which assesses a tendency to remain calm in stressful situations, and low tension under pressure), and the 16-item *Coldheartedness* scale (which assesses an absence of deep feelings of loyalty,

empathy, and guilt) (Lilienfeld & Widows, 2005). The PPI-R statements are answered using a Likert type scale (1 = *false*, 2 = *mostly false*, 3 = *mostly true*, 4 = *true*). Our research group translated the PPI-R measure into Swedish and a translator conducted the back-translation. The developer (Scott Lilienfeld, personal communication) reviewed the back-translated items. The Psychological Assessment Resources (PAR) approved the final translation.

### **Missing data**

According to the instructions in the PPI-manual (Lilienfeld & Widows, 2005, p.8), if more than 20% of the items were missing, the scale was considered invalid and was excluded from the analysis. Scales with less than 20% missing data were prorated on the basis of the mean for the completed items.

## **Results**

### **PPI-R scales descriptive statistics**

The average scores for the three PPI-R subscales were: Fearlessness ( $M = 32.0$ ,  $SD = 7.7$ ); Stress Immunity ( $M = 38.3$ ;  $SD = 5.9$ ) and Coldheartedness ( $M = 35.9$ ,  $SD = 7.7$ ). Scores on the Coldheartedness scale were higher (even though not statistically significant) among participants residing in high SES-neighborhoods ( $M = 38.4$ ,  $SD = 7.1$ ), compared to participants residing in low SES-neighborhoods ( $M = 34.4$ ,  $SD = 8.1$ ), Cohen's  $d = .53$ .

### **Perceptions of danger**

Perceptions of danger differed somewhat across different neighborhoods. In the low SES neighborhoods, 29 individuals (i.e., 82.4%) reported that they think their neighborhood is rather safe or very safe. The corresponding figure for the high SES neighborhoods was 22 individuals (i.e., 96.6%). Moreover, six individuals (i.e., 17%) in the low SES neighborhoods, however no participant in the high SES neighborhoods, reported that they on some occasion during the last 12 months have refrained from going out at night because they have been afraid of becoming assaulted, robbed, or in any other way harassed.

### **Violent perpetration and associations with degree of Coldheartedness**

All incidents of perpetration of threats or violence occurred in the low SES neighborhoods. Four participants (12.1%) reported having subjected someone else to threats or threats about violence and six participants, (20.0%) reported having subjected someone to violence, over the last 12 months. In two cases, the same individual reported having subjected someone to both threats and violence.

### **Response rate: follow up analysis**

Three months following the last reminder, a follow-up study was conducted to explore reasons for not participating in the study. The first author conducted a brief telephone interview with a random group of non-respondents ( $n = 30$ ). One individual reported having sent in the paper survey. Fourteen individuals reported remember having received study information, however the majority of these individuals had never logged into the web survey. The main reasons for not participating were lack of time and lack of interest in the study topic.

### **Limitations**

This study has several limitations. Due to the low response rate, the results are highly underpowered. Moreover, the cross-sectional design makes it impossible to draw any conclusions about causality. More generally, future research should further parse out in what ways different neighborhood factors might contribute to behavioral outcomes, when potential effects might simply be due to individuals moving to certain areas. Future research should investigate whether using a mixed-method approach, by allowing participants to choose between paper based and web-based survey might lead to a higher response rate. Finally, the ways in which a “neighborhood” should be defined might not be constrained by administrative boundaries, particularly in regards to dynamic, social processes (Diez Roux & Mair, 2010). Future studies on neighborhood factors should incorporate qualitative surveys



about individual perceptions about what constitutes a neighborhood. Moreover, resident surveys should also be complemented with structural, objective observations of neighborhoods features (e.g., “physical disorder” and “decay”).

### **Concluding remarks**

We believe the design of this pilot study could be informative for future large-scale studies on associations between affective psychopathic traits, socioeconomic factors, and risk behaviors. In a more general sense, investigating associations between dynamic neighborhood factors (e.g., collective efficacy, social capital) and violent behaviors in neighborhoods with varying SES could be informative to policymakers. Obtaining an adequate response rate in research on representative community samples is methodologically challenging. Appropriate methodology should be further investigated in future research.

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**Table 1.** Participant characteristics

	Low SES neighborhoods	High SES neighborhoods
<b>Total</b>	35 (60.3%)	23 (39.7%)
<b>Age</b>		
18-24 years	9 (26.5%)	8 (42.1%)
25-29 years	10 (29.4%)	1 (5.3%)
30-39 years	13 (38.2%)	10 (52.6%)
40-49 years	2 (5.9%)	0 (0%)
<b>Country of origin</b>		
Sweden	20 (57.1%)	19 (82.6%)
Other	15 (42.9%)	4 (17.4%)
<b>Civil status</b>		
Unmarried	19 (54.3%)	10 (43.5%)
Married/cohabitating/civil union	15 (42.9%)	11 (47.8%)
Divorced	0 (0%)	1 (4.3%)
Other	1 (2.9%)	1 (4.3%)
<b>Highest level of education</b>		
Compulsory school	1 (2.9%)	1 (4.3%)
High school/vocational training, max 2 years	1 (2.9%)	2 (8.7%)
High school/vocational training, 3 years	18 (51.4%)	10 (43.5%)
Other vocational training	2 (5.7%)	0 (0%)
University/college, max 2 years	2 (5.7%)	3 (13.0%)
University, college, more than 2 years	10 (28.6%)	6 (26.1%)
Other	1 (2.9%)	1 (4.3%)
<b>Occupation</b>		
Employed	21 (60.0%)	17 (73.9%)
Self-employed (own business)	4 (11.4%)	1 (4.3%)
Job seeker/unemployment benefit sanctions	4 (11.4%)	0 (0%)
Student	5 (14.3%)	4 (17.4%)
Retired/sickness benefit/early retirement pension	0 (0%)	1 (4.3%)
Other	1 (2.9%)	(0%)
<b>Monthly average income</b>		
< 10 000 SEK <sup>a</sup>	7 (20.0%)	4 (17.4%)
10 000 – 19 999 SEK	5 (14.3%)	4 (17.4%)
20 000 – 29 999 SEK	14 (40%)	6 (26.1%)
30 000 – 39 999 SEK	6 (17.1%)	4 (17.4%)
40 000 – 49 999 SEK	2 (5.7%)	1 (4.3%)
50 – 59 999 SEK	0 (0%)	1 (4.3%)
> 60 000 SEK	1 (2.9%)	3 (13%)
<b>Threats<sup>b</sup></b>		
Victimization	9 (25.7%)	(0%)
Perpetration	4 (12.1%)	(0%)
<b>Violence<sup>c</sup></b>		
Victimization	7 (20.0%)	(0%)
Perpetration	6 (20.0%)	(0%)

*Note* <sup>a</sup>1 SEK = .14 USD. <sup>b</sup>Over the last 12 months, have you been subjected to/subjected anyone to threats or threats about violence? <sup>c</sup>Over the last 12 months, have you been subjected to/subjected anyone to violence?