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Differences in the Factor Structure of the Strengths and Difficulties Questionnaire in  
Northern Irish Children.

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## **Abstract**

This study presents the psychometric properties of the Strengths and Difficulties Questionnaire (SDQ) in a sample of 386 Northern Irish adolescents. Structural validity was evaluated by exploratory and confirmatory factor analysis. Agreement was found with 3 of the 5 original factor structures: Emotional Problems, Prosocial, and Hyperactivity. However, unlike in the original SDQ, there appeared to be 2 distinct and separate Conduct factors, an Aggressive Conduct and an Antisocial Conduct factor. Furthermore, there appeared to be a Good Behavior factor, which is not present in the original factor structure. The findings imply that when using the SDQ with children and adolescents exposed to community and political conflict, results should be interpreted with caution. Further research is warranted to explore the reliability of the original factor structure with these young people who experience unique developmental trajectories compared with their peers who do not grow up in such an environment.

**Keywords:** Strengths and Difficulties Questionnaire, Northern Ireland, adolescents, community conflict, political conflict

The Strengths and Difficulties Questionnaire (SDQ) is a brief behavioral screening tool used with 4- to 16-year-olds to provide information on the behavior, emotions, and relationships of young people (Goodman, 1997). The psychometric properties of the SDQ have been investigated in numerous studies. Factor analysis of all three versions (self-, parent, and teacher report) has indicated five factors, which reflect the hypothesized domains of psychopathology and personal strengths (Goodman, 2001; Smedje, Broman, Hetta, & Von Knorring, 1999).

The SDQ has been widely used in many countries and across cultures with success. Muris, Meesters, and Van Den Berg (2003) carried out the first investigation of the psychometric properties of the SDQ in a community sample of Dutch adolescents and children. They concluded that factor analysis identified five factors reflecting those hypothesized by Goodman (2001). They also reported acceptable internal consistency and test-retest reliability of the SDQ scales as well as meaningful correlations with other psychiatric measures. These findings supported that the psychometric properties of the SDQ are highly similar when administered to young people in various Western and non-Western countries, as reported by several others (Smedje et al., 1999).

The SDQ has also been employed in studies involving young people in regions affected by conflict (Thabet & Karim, 2006). The measure has been widely used in studies of young people in Northern Ireland, a country with a complicated past, and although a ceasefire has been in place since the Good Friday Agreement of 1998, political violence is still commonplace on the streets of Northern Ireland.

The measure's properties have not been examined with children exposed to such community or political violence, and it is probable that the developmental trajectories of such children will differ from those not experiencing such exposure (Cummings & Lovell, 2001).

Consistent with this, we report data that suggest the factor structure of the SDQ in the conflict-affected region of Northern Ireland differs in important respects to its original structure. We will argue that this means the SDQ should be interpreted with caution when used in conflict-affected regions, and that existing studies using the SDQ in Northern Ireland and other conflicted-affected regions might benefit from being revisited (Cousins, Taggart, & Milner, 2010).

## **Method**

Three hundred eighty-six Northern Irish 15- to 18-year-olds (152 males and 234 females) completed the SDQ, self-report version (Goodman, 1997). Participants were drawn from randomly selected secondary schools in Belfast and Londonderry, representing both sides of the Catholic and Protestant community. The study was approved by a university ethics committee.

## **Results**

A maximum likelihood factor analysis was carried out using oblimin rotation with Kaiser normalization and suppressing any values of less than .25. This resulted in a seven-factor solution, accounting for 53% of the variance (see Table 1).

## **Discussion**

### *Similarities With the Original SDQ*

The factors labeled Prosocial and Emotional were identical to those in the original SDQ in terms of item composition. Furthermore, although the factors Hyperactivity and Peer Relations differed from the original SDQ with regard to some items, they nevertheless still appeared to be measuring similar constructs.

### *Differences From the Original SDQ*

In the current sample, the fourth factor could be characterized as Good Behavior. However, there is no such factor on the original SDQ. The internal consistency of Good Behavior is below an acceptable level but is approaching this, and therefore arguably worthy of further investigation.

The original SDQ included a single Conduct factor. In the Northern Irish sample, however, this appeared to be a split into Aggressive Conduct and Antisocial Conduct. Although the latter of these was similar to the original SDQ's Conduct construct, the former seemed to separate out very specifically a more violent type of conduct problem.

## **Implications**

These findings are consistent with the hypothesis of Cummings and Lovell (2001) that children who grow up in an environment of political conflict are likely to be affected at multiple levels of societal and emotional functioning. It appears that, for Northern Irish children, there is an additional Good Behavior factor and two distinct Conduct factors: Aggressive Conduct and Antisocial Conduct. This may be a reflection of the growing levels of intracommunity violence experienced by young people in some Northern Irish communities (Marrow, 2008).

We believe that this means the SDQ should be interpreted with caution when used in conflict-affected regions, and that existing studies using the SDQ in Northern Ireland and other conflicted-affected regions might benefit from being revisited (Cousins et al., 2010). It will be interesting to see whether a similar, altered factor structure is observed with samples from other conflict-affected regions.

### **Acknowledgements**

This paper is dedicated to the memory of Professor Ed Cairns, who supervised this work, and who would most likely have been an author on this paper had he been alive today.

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Table 1 Factor structure of the SDQ with a Northern Irish sample and alpha coefficients.

Factor in Original SDQ	Items	Factor 1 (Hyperactivity) $\alpha$ .66	Factor 2 (Prosocial) $\alpha$ .65	Factor3 (Emotional) $\alpha$ .72	Factor 4 (Good Behav.) $\alpha$ .50	Factor5 (Aggressive Con.) $\alpha$ .49	Factor 6 (Anti Social) $\alpha$ .51	Factor 7 (Peer Relations) $\alpha$ .17
Hyperactivity	Fidgets	.895						
Hyperactivity	Restless	.598						
Hyperactivity	Distracted	.337			-.301			
Peer problems	Friend							
Prosocial	Cares		.575					
Prosocial	Considerate		.541					
Prosocial	Kind		.482					
Prosocial	Share		.468					
Prosocial	Helps out		.415		.308			
Emotional	Sad			.592				
Emotional	Worry			.586				
Emotional	Clingy			.585				
Emotional	Afraid			.529				
Emotional	Sickness			.463				
Peer problems	Popular							
Hyperactivity	Attention				.576			
Conduct	Obedient				.414			
Conduct	Angry					.624		
Conduct	Fights					.498		
Peer problems	Bullies						.544	
Conduct	Steal						.515	.354
Conduct	Lies						.436	
Peer problems	Alone							.421
Hyperactivity	Reflects			-.300				.324
Peer problems	Better with adults							

Only loadings above .30 are shown. 'Good Behav.'='Good Behaviour'; 'Aggressive Con.'='Aggressive Conduct'