# Agreement of the CGI-SCH scale with the Marder's PANSS positive and negative score 

Josep M. Haro ${ }^{\text {a }}$, Cristina Domenech ${ }^{\text {a }}$, Peter B. Jones ${ }^{\text {b }}$, Susana Ochoa ${ }^{\text {a }}$



## BACKGROUND

CGI-SCH scale is a five-item scale that has been proved valid and reliable to evaluate severity and treatment response in schizophrenia. It was assessed (Haro et al. 2003) against the PANSS five dimensions (Vincon et al., 1999). The Marder positive and negative symptom factors (Edgar et al., 2014) may be a more valid alternative to summarize the PANSS ratings.

## OBJECTIVES

To compare the the ratings of the Clinical Global ImpressionSchizophrenia (CGI-SCH) scale with the Marder's PANSS positive and negative symptom scores.

## METHODS

The study sample included in- and out-patients with schizophrenia (according to IDC-10 or DSM-IV criteria), as well as patients experiencing an acute episode and those in a stable condition from three centres (Parc Sanitari Sant Joan de Deu in Barcelona, Spain, the University of Cambridge in the UK and the University of Ioannina in Greece). All patients were receiving psychiatric treatment, were 18 years or older, and gave informed consent for participation. Patients were evaluated with the CGI-SCH scales (Haro et al., 2003), the Positiva and Negative Symptoms Scale (PANSS), the Global Assessment of Functioning Scale (GAF) and the EuroQoL 5D. Patients included in the study were rated by two clinicians (one of whom was usually the treating psychiatrist) using the battery of instruments. The study protocol was approved by the ethics committees of the participating institutions.

Table 1. Description of the sample

|  | $\mathrm{N}(\%)$ |  | Mean (sd) |
| :--- | :---: | :--- | :---: |
|  | $114(100)$ | Age at first treatment | $24.1(6.6)$ |
| Setting |  | Age | $36.9(10.8)$ |
| Inpatient | $51(44.7)$ | PANSS negative score | $17.8(8.2)$ |
| Outpatient | $63(55.3)$ | PANSS positive score | $22.5(8.7)$ |
| Female | $33(28.9)$ | HDRS | $11.8(6.0)$ |
| Single | $83(72.8)$ | GAF | $44.2(18.9)$ |
| $>12$ yrs education | $49(43.0)$ | EQ-5D VAS | $67.6(21.8)$ |
| Working for pay | $17(14.9)$ | CGI-SCH positive | $3.9(1.7)$ |
| Living | $35(30.7)$ | CGI-SCH negative | $3.4(1.4)$ |
| independently |  | CGI-SCH depressive | $2.0(1.0)$ |

HDRS: Hamilton depression rating scale / GAF: Global Assessment of Functionin EQ-5D VAS: Visual analogue scale of the EuroQoL 5D

Table 2. Person correlation coefficient between the scales

|  | PANSS <br> Positive | GAF | EQ-5D <br> VAS | CGI-SCH <br> Positive | CGI-SCH <br> Negative |
| :--- | :---: | :---: | :---: | :---: | :---: |
| PANSS Negative | $.292^{* *}$ | $-.476^{* *}$ | -0.144 | $.195^{*}$ | $.819^{* *}$ |
| PANSS Positive |  | $-.662^{* *}$ | -0.153 | $.815^{* *}$ | $.433^{* *}$ |
| GAF |  |  | 0.146 | $-.562^{* *}$ | $-.536^{* *}$ |
| EQ-5D VAS |  |  |  | $-.217^{*}$ | -.112 |
| CGI-SCH |  |  |  |  | $.376^{* *}$ |
| Positive |  |  |  |  |  |

Figure 1. Box and whiskers plot of the PANSS positive score and the CGI-SCH positive symptoms.


Figure 2. Box and whiskers plot of the PANSS negative score and the CGI-SCH negative symptoms.


Table 3. Partial correlation coefficient between the scales adjusting for HRDS severity

|  | PANSS <br> positive score | CGI-SCH <br> positive | CGI-SCH <br> negative |
| :--- | :---: | :---: | :---: |
| PANSS negative | , 126 | ,- 012 | , $792 * * *$ |
| PANSS positive |  | , $739 * * *$ | , 276 |
| CGI-SCH positive |  |  | , 162 |

* $\mathrm{p}<0.05 ; * * \mathrm{p}<0.01 ; * * * \mathrm{p}<0.001$

Similar correlation between the HDRS and the PANSS negative score ( $0.316, \mathrm{p}<0.01$ ) and the CGI-negative score ( $0.321, \mathrm{p}<0.01$ ).

## CONCLUSION

The CGI-SCH positive and negative items have high concordance with the Marder's PANSS positive and negative symptoms score, respectively.
The correlation between PANSS negative and CGI-SCH negative scores is not affected by the severity of depressive symptoms. Given its simplicity, brevity and validity, the scale is appropriate for use in observational studies, clinical trials and routine clinical practice.

## REFERENCES

Haro JM, Kamath SA, Ochoa S et al. The Clinical Global Impression-Schizophrenia scale: a simple instrument to measure the diversity of symptoms present in schizophrenia. Acta Psychiatr Scand 2003;107(suppl. 416):16-23.
Lancon C, Reine G, Llorca PM, Auquier P. Validity and reliability of the French-language version of the positive and negative syndrome scale (PANSS). Acta Psychiatr Scand 1999;100:237-243.
Edgar CJ, Blaettler T, Bugarski-Kirola D, Le Scouiller S, Garibaldi GM, Marder SR. Reliability, validity and ability to detect change of the PANSS negative symptom factor score in outpatients with schizophrenia on select antipsychotics and with prominent negative or disorganized thought symptoms. Psychiatry Res. 2014;218:219-24

