

# Psychometric evaluation of child-based patient-reported outcome measures (pSN-5) for sinonasal disease

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Note: To be used in conjunction with SN-5  
Available at: <https://www.researchgate.net/project/Development-and-validation-of-a-child-friendly-Sinus-and-Nasal-Quality-of-Life-Survey-SN-5-Patient-Reported-Outcome-Measure-for-evaluating-sino-nasal-disease-in-children>

## Aim

To develop and validate a modified version of the SN-5 for children aged 7-15

## Why this is important?

- Currently no child-based PROM available
- Sinonasal disease is a chronic disease impacting both child and parents with different priority and opinion
- To guide treatment escalation

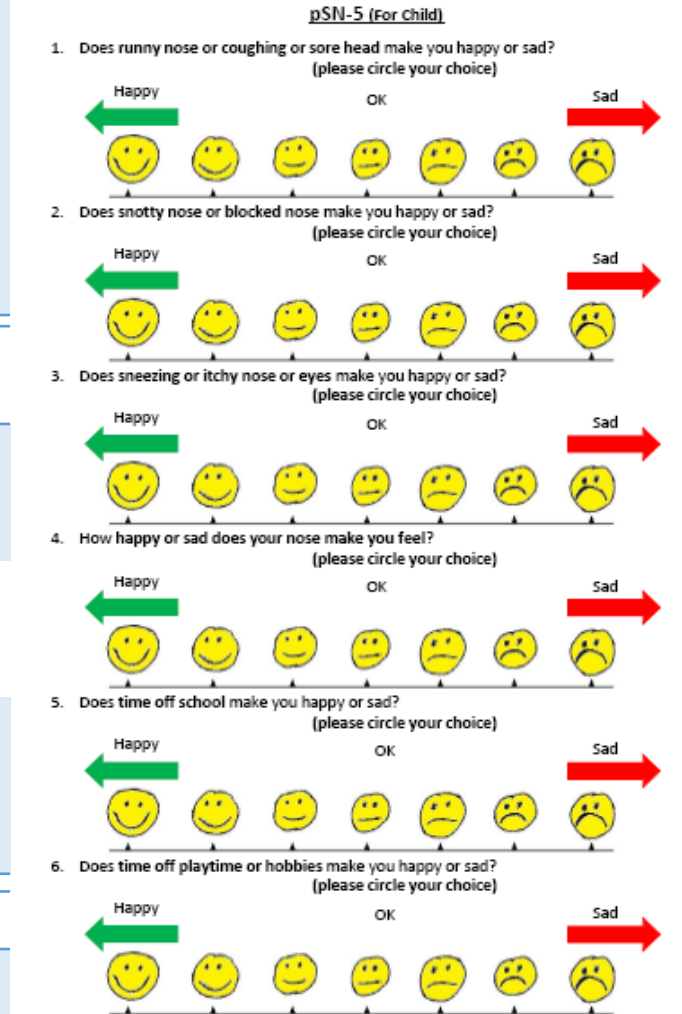
## Methods

- Convenience sampling
- Recruited from ENT clinic
- Patients aged 7-15 were invited
- Child completed pSN-5 and parents completed SN-5 during visit
- Second responses were posted in 4 weeks with return enveloped
- Internal validity, Test-retest reliability and construct validity were assessed

Outcome measures	What are we looking at?	Statistical test	pSN-5 performance results	What does this mean?
Internal validity	Do all children understand the pSN-5 items equally?	Cronbach's $\alpha$ Ideal $\alpha$ : 0.70 SN-5 $\alpha$ : 0.62	pSN-5 global $\alpha$ : 0.69 7-11 y/o $\alpha$ : 0.70 12-15 y/o $\alpha$ : 0.65	Every child that tried the pSN-5 understand the items equally with those 7-11 y/o have better conformity.
Test-retest reliability	Is the pSN-5 response reproducible in 4-weeks?	Bland-Altman Level of Agreement (LoA): $\pm 1$	No statistically significant biases were seen on all items ( $p > 0.05$ ).	There are no difference in the child responses to the items in 4 weeks time.
Construct validity	Is the pSN-5 reflective and consistent of the SN-5?		Statistically significant biases seen for Item 1, Item 2, Item 3, Item 6 and the Overall Item Means (OIM).	Item 1, Item 2 and Item 3, were clinically bias towards the pSN-5 (child's response). Meanwhile Item 6 towards the SN-5 (parent's response). OIM is withing LoA.

## Conclusion

The pSN-5 is a short and child-friendly PROM, with acceptable internal consistency and adequate 4 weeks test-retest reliability. The pSN-5 has highlighted the difference in disease experience between the child and their parents and should be used with the SN-5 for sinonasal disease in children.



Emoji was drawn by Mohamad Atif Mohd Slim