Title: Associations between language processing and nonverbal communication skills and social skill development among youth with spina bifida.

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Objective: The purpose of this study was to investigate language processing and nonverbal communication skills of youth with spina bifida (SB) using the Comprehensive Assessment of Spoken Language (CASL) and the Diagnostic Analysis of Nonverbal Accuracy (DANVA). Furthermore, this study aimed to investigate whether the CASL and the DANVA are significant predictors of social skill development among youth with SB.

Participants and Methods: This study was part of a larger longitudinal study examining neuropsychological functioning and psychosocial adjustment among youth with SB. Participants included 134 families of youth with SB (62 male, 72 female) between the ages of 8 and 16 (M = 11.42, SD = 3.13). Youth completed the Non-literal Language, Inference, and Pragmatic Judgment subtests of the CASL, and the Faces, Paralanguage, and Posture subtests of the DANVA. Additionally, Vocabulary and Matrix Reasoning subtests of the Wechsler Abbreviated Scale of Intelligence (WASI) were administered to estimate for IQ. Caregivers completed demographic questionnaires and the Social Skills Rating System (SSRS).

Results: Participants preformed in the Low Average to Average range on the CASL: Non-literal Language (M SS = 93.69, SD = 19.14), Inference (M SS = 85.57, SD = 20.81), and Pragmatic Judgment (M SS = 88.33, SD = 18.80). Furthermore, participants preformed in the Low Average to Average range on the DANVA: Faces (M SS = 88.87, SD = 22.19), Paralanguage (M SS = 87.02, SD = 17.12), and Postures (M SS = 88.05, SD = 16.83). These subtests were significantly associated with the WASI full-scale IQ score. Regression analyses revealed that the Non-literal language subtest of the CASL was significantly associated with the self-control subtest, and the Inference subtest of the CASL was significantly associated with the responsibility and assertiveness subtests. Furthermore, the Paralanguage subtest of the DANVA was significantly associated with each domain of social skill development, and the Faces subtest of the DANVA was significantly associated with only the cooperation subtest.

Conclusion: Findings suggest that language processing and nonverbal communication skills of youth with SB are within the average to low average range. Analyses also reveal that performance on the CASL and the DANVA significantly relate to social skill development of youth with SB.

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