

Self-Determination and Student Transition Planning Knowledge and Skills: Predicting Involvement

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Promoting active student involvement in transition planning has become best practice in promoting self-determination. This study examined the contribution of self-determination to transition planning knowledge and skills for 180 students with disabilities. Utilizing multiple regression analyses, the study found that global self-determination was a significant predictor of overall transition planning knowledge and skills, as well as of transition planning factors related to knowledge and skills about the individualized education program team process, goals, and decision making. Furthermore, when self-determination was broken into its component elements and included in the analyses, those elements, particularly self-regulation and self-awareness/self-knowledge, became the sole predictors of transition planning knowledge and skills.

When transition-related requirements were added to the Individuals With Disabilities Education Act during the 1990 reauthorization, they were linked to language pertaining to student involvement in educational planning. Specifically, the Individuals With Disabilities Education Act student involvement mandates require that if transition goals are to be discussed, the student must be invited to the individualized education program (IEP) meeting. Of course, because the Individuals With Disabilities Education Act requires that the IEP teams of all students receiving special education services from age 16 onward address needed transition services, it goes without saying that all students aged 16 and older must be invited to their IEP meeting.

The logic behind this is that if the IEP team is to discuss transition-related goals and outcomes, students must be involved for the simple reason that it is their future being planned. Not coincidentally, the self-determination movement within special education emerged in conjunction with the transition mandates and, more closely, the student

involvement requirements in the law. In fact, shortly after the first self-determination projects were begun, several were focusing on the transition planning process as a means to both teach and generalize skills related to self-determination (Ward & Kohler, 1996). Active student involvement in transition planning is, by now, accepted as best practice in transition and as a means to promote self-determination (Test et al., 2004). Several programs to promote active student involvement now exist (Halpern et al., 1997; Martin, Marshall, Maxson, & Jerman, 1996; Wehmeyer et al., 2004), and there is now an emerging empirical database that confirms the efficacy of these programs (Allen, Smith, Test, Flowers, & Wood, 2001; Cross, Cooke, Wood, & Test, 1999; Wehmeyer & Lawrence, 1995, in press; Zhang, 2001) and examines factors contributing to active student involvement (Martin, Marshall, & Sale, 2004; Martin et al., 2006).

What has not been studied, to any extent, is the relationship between self-determination and student involvement. We have been engaged in a multistate, multidistrict study of the impact of interventions to promote self-determination—including interventions promoting student involvement in transition planning—on student self-determination and adult outcomes. The present study sought to determine the role of self-determination in active student involvement in transition planning.

METHOD

Sample

Participants were 180 students receiving special education services recruited from 25 school districts in four states. Within those 25 school districts, students attended 50 different high schools or were involved with an 18–21 program linked, administratively, to that high school. The mean age for the sample was 17.73 years (range = 14.4–21.8 years, $SD = 1.5$). The sample contained 111 boys (M age = 17.8 years, $SD = 1.53$) and 69 girls (M age = 17.63, $SD = 1.49$). Eighty-one students (45% of the sample) were eligible for special education services under the mental retardation category, 32 (18%) were identified as having learning disabilities, 18 (10%) as having autism, and 11 (6%) as having emotional or behavioral disorders; the remaining students were distributed across the special education categories of hearing impairment, other health impairment, speech or language impairment, and visual impairment (each category contained less than 5% of the sample). Current IQ score data were available from school records for only 63 students. The mean IQ score for this group was 67.5 ($SD = 15.57$). Participants for this study were recruited as part of a larger, multistate, randomized trial intervention study.

Procedures

Data from the measures described in the “Instrumentation” section were collected by teachers working with students recruited for the study or by project personnel at the request of the districts. The initial contact for participation in the study was made with district-level personnel and was typically followed with district-level consent. Once

district approval was obtained, teachers were recruited by district coordinators with the help of recruitment materials developed by project staff. Project staff and district coordinators worked together to establish a time during which project staff could conduct training on administering the measures. Measurement instruments were returned unscored to project staff, who scored them and entered data into SPSS for Windows.

Instrumentation

Measuring self-determination. Student self-determination was assessed by The Arc's Self-Determination Scale. The Arc's Self-Determination Scale (Wehmeyer, 1996; Wehmeyer & Kelchner, 1995) is a 72-item self-report measure that provides data on overall self-determination and four essential characteristics of self-determination. The measure was normed with 500 students with and without cognitive disabilities in rural, urban, and suburban school districts across five states and has adequate validity and reliability. Coefficient alpha for the scale is .90. Construct validity was determined by multiple means, the first of which was a factor structure analysis. The mean overall score from the norming sample was 97.52 ($SD = 19.43$). The mean score for each sub-domain was as follows: Autonomy, 63.35 ($SD = 15.50$); Self-Regulation, 9.78 ($SD = 4.95$); Psychological Empowerment, 13.28 ($SD = 2.64$); and Self-Realization, 11.11 ($SD = 2.25$). The scale operationalizes an empirically validated theory of self-determination (Wehmeyer, 2001) and has been used to document the importance of self-determination for positive adult outcomes (Wehmeyer & Palmer, 2003; Wehmeyer & Schwartz, 1997) and student involvement in educational planning (Cross et al., 1999; Zhang, 2001) for youth with disabilities. It has also provided validation of interventions to promote self-determination (Wehmeyer, Palmer, Agran, Mithaug, & Martin, 2000).

Measuring transition knowledge and skills. Student knowledge and skills were determined by a 20-item questionnaire derived from a criterion reference tool developed by Wehmeyer and Lawrence (1995; in press) to determine the impact of a self-directed transition planning program titled *Whose Future Is it Anyway?* (Wehmeyer et al., 2004). The questionnaire used in this study (summarized in Table 1) contained 20 items focusing on student knowledge and skills concerning the IEP and transition planning process, team planning skills, decision making, self-advocacy, and goal setting. In addition to these questions, the pre- and posttests included two questions concerning student knowledge about their previous IEP meeting and their current transition goals. Students were asked if they had attended their last IEP meeting and if they knew at least one goal from their previous IEP meeting.

Analyses

Factor analysis. We were interested in examining the relationship between student transition planning knowledge and skills relative self-determination. To create factors constituting student transition planning knowledge and skills, we conducted a factor analysis of the Transition Planning Knowledge and Skills Questionnaire. Data were factored

TABLE 1
Items on Transition Planning Knowledge and Skills Questionnaire

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1. Purpose of IEP to talk about yearly set goals
 2. School records include IEP
 3. Law says transition goals based on needs preferences
 4. Living, work, school, leisure outcomes addressed in IEP
 5. IEP meetings held annually
 6. Decision making multistep process
 7. Options are things to choose from
 8. In decision making, options are list of things to choose from
 9. Transition planning involves decisions about your life and future
 10. Giving permission to change services is informed consent
 11. Something you set out to do is a goal
 12. Parents and teachers can help with goals
 13. You can track progress on goals with starting point and measurement
 14. Standing up for yourself is being assertive
 15. Making sure people do what they say is follow-up
 16. If decisions are made you disagree with, you should appeal
 17. To have an effective meeting, you should prepare
 18. If people at the meeting have different ideas, you all should work together
 19. A group of people who work together for a common goal is a team
 20. The people agencies for support are community resources
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Note. IEP = individualized education program.

using a principal components analysis with eigenvalues greater than 1.0 retained for further analysis. Remaining factors were subjected to varimax rotation, and the resulting factor pattern was analyzed for content. Criterion for item inclusion was a factor loading of at least .30, and a minimum of three items was required to establish a coherent theme for a factor.

Descriptive analyses. Mean total self-determination scores (SDS Total), subdomain scores, frequencies correct on the Transition Planning Knowledge and Skills Questionnaire (TPKSQ Total), and factors derived from the TPKSQ were calculated and are reported here. A bivariate correlational analysis between total and subdomain measures of self-determination and transition planning was conducted to determine Pearson's correlation coefficients. Differences among students on SDS Total and TPKSQ Total by type of disability and gender were examined using general linear model multivariate analysis of variance with Scheffé post hoc tests for type of disability. For purposes of analysis, students were assigned to one of four groups based on their disability category: mental retardation, learning disability, autism or emotional or behavioral disorders, or other.

Regression analyses. To identify regression models that best explained the variance in overall SDS Total, overall TPKSQ Total and factor frequencies, and the degree to which students participated in their IEP meeting or were aware of their transition goals, we conducted multiple linear regression analyses with indicators of transition planning

TABLE 2
Factors by Item Number

<i>Factor</i>					
<i>I</i>	2	3	4	5	6
2	2	1	7	5	3
4	4	5	8	6	11
10	6	9	14	11	13
12	8	12	20	15	
16	9	13		18	
18	10				
19	11				
	17				

knowledge and skills as dependent variables. For all regression analyses, independent or predictor variables were entered into the model simultaneously and not stepwise.

RESULTS

Factor Analysis

Initial analysis of the TPKSQ items yielded six factors with eigenvalues greater than 1.0, accounting for 56% of the variance. When each item was forced to fit on only one factor, the rotated factor structure yielded three factors, essentially interpretable as focusing on knowledge and skills related to (a) the IEP team and working as a team, (b) decision making, and (c) goals and goal setting. Given that our purpose for conducting the factor analysis was to identify items that might group together and provide more information than a total score about transition-related knowledge and skills, we opted to take the more liberal approach of building factors using all items whose factor loading was .30 or higher and, thus, allowing items to load on multiple factors. That outcome is represented in Table 2. As one would expect from forcing items to load on only one factor, Factors 1, 2, and 3 were still, essentially, interpretable as the IEP Team, Decision-making, and Goals factors, and Factors 4, 5, and 6 were, in essence, just subsets of those. As such, all subsequent analyses were conducted with only summed frequencies for Factors 1, 2, and 3.

Descriptive Analyses

The average number of items correct on the TPKSQ for the sample was 13.64 (range = 3–20, $SD = 4.17$). The mean number correct on the TPKSQ IEP Team factor was 5.044 (range = 0–7, $SD = 1.88$), on the TPKSQ Decision-making factor was 5.68 (range = 0–8, $SD = 2.11$), and on the TPKSQ Goal factor was 3.367 (range = 0–5, $SD = 1.53$). The mean SDS Total for the sample was 92.91 (range = 44–141, $SD = 20.8$). The mean

TABLE 3
Mean TPKSQ Total Frequencies and SDS Total by Type of Disability

<i>Dependent Variable</i>	<i>Type of Disability</i>	<i>M</i>	<i>SD</i>	<i>n</i>
TPKSQ total	Mental retardation	12.32	3.86	81
	Learning disability	15.84	3.35	3
	Autism or EDBD	14.69	4.08	29
	Other	13.78	4.59	38
SDS total	Mental retardation	88.38	22.48	81
	Learning disability	105.91	14.45	32
	Autism or EDBD	89.17	18.42	29
	Other	94.50	18.93	38

Note. TPKSQ = Transition Planning Knowledge and Skills Questionnaire; SDS = self-determination scores; EDBD = emotional or behavioral disorder.

of the SDS Autonomy subdomain was 59.6 (range = 20–96, $SD = 17.73$), of the Self-Regulation subdomain was 9.55 (range = 0–20, $SD = 4.64$), of the Psychological Empowerment subdomain was 12.94 (range = 6–16, $SD = 2.50$), and of the Self-Realization subdomain was 11.35 (range = 5–17, $SD = 2.08$). With the exception of the Self-Realization mean, these were all slightly below the mean for The Arc's Self-Determination Scale norms.

In all, 141 students (78.3% of the sample) had been present at their last IEP meeting and 16 (8.9%) had not been; the information was not available for 23 students (12.8%). We found that 107 students (59.4%) indicated that they knew what their IEP goals or objectives were, 62 (34.4%) indicated that they did not, and there were missing data for 11 students (6.1%). In all, 90 students (50%) indicated both that they had been at their last IEP meeting and that they knew what their IEP goals and objectives were, and 57 students (32%) either had not been present at their previous IEP meeting or didn't know what their goals were; data were missing on one or both indicators for 33 students (18%).

The multivariate analysis of variance for Gender and Disability Group \times SDS Total and TPKSQ Total yielded no significant differences by gender on either score but yielded highly significant differences by type of disability on TPKSQ Total, $F(3, 176) = 7.24, p < .0001$, and SDS Total, $F(3, 176) = 5.70, p = .001$. Table 3 provides mean frequencies and TPKSQ Total and SDS Total by disability status, and Table 4 provides results of post hoc analyses of disability group by SDS Total and TPKSQ Total. As can be seen from these tables, differences on the TPKSQ Total frequency were between students with mental retardation and students with learning disabilities, with the former scoring significantly lower; differences on the SDS Total were attributable to differences between students with mental retardation and students with learning disabilities and between students with learning disabilities and students with autism or emotional or behavioral disorders. Students with learning disabilities scored the highest on The Arc's Self-Determination Scale, with those significantly scores than either different scores from students with mental retardation or students with autism or emotional or behavioral disorders.

Table 5 provides the correlation matrix for TPKSQ Total and factor scores and SDS Total and subdomain scores. Worth noting from this table is that the correlation between

TABLE 4
Multiple Comparisons for Disability Group by TPKSQ Total and SDS Total

Dependent Variable	Disability	Group	Mean Difference	SE	p	95% Confidence Interval	
						Lower Bound	Upper Bound
TPKSQ Total	Mental retardation	Learning disability	-3.5228*	0.83078	.001	-5.8678	-1.1777
		Autism or EDBD	-2.3687	0.86103	.059	-4.7991	0.0618
		Other	-1.4685	0.78236	.321	-3.6769	0.7399
	Learning disability	Mental retardation	3.5228*	0.83078	.001	1.1777	5.8678
		Autism or EDBD	1.1541	1.02013	.734	-1.7255	4.0337
		Other	2.0543	0.95466	.205	-0.6405	4.7490
	Autism or EDBD	Mental retardation	2.3687	0.86103	.059	-0.0618	4.7991
		Learning Disability	-1.1541	1.02013	.734	-4.0337	1.7255
		Other	0.9002	0.98110	.839	-1.8692	3.6696
	Other	Mental retardation	1.4685	0.78236	.321	-0.7399	3.6769
Learning disability		-2.0543	0.95466	.205	-4.7490	0.6405	
Autism or EDBD		-0.9002	0.98110	.839	-3.6696	1.8692	
SDS Total	Mental retardation	Learning disability	-17.5235*	4.15467	.001	-29.2511	-5.7960
		Autism or EDBD	-0.7897	4.30596	.998	-12.9443	11.3649
		Other	-6.1173	3.91250	.487	-17.1612	4.9266
	Learning disability	Mental retardation	17.5235*	4.15467	.001	5.7960	29.2511
		Autism or EDBD	16.7338*	5.10159	.015	2.3334	31.1343
		Other	11.4063	4.77416	.131	-2.0699	24.8824
	Autism or EDBD	Mental retardation	0.7897	4.30596	.998	-11.3649	12.9443
		Learning Disability	-16.7338*	5.10159	.015	-31.1343	-2.3334
		Other	-5.3276	4.90638	.758	-19.1770	8.5218
	Other	Mental retardation	6.1173	3.91250	.487	-4.9266	17.1612
Learning disability		-11.4063	4.77416	.131	-24.8824	2.0699	
Autism or EDBD		5.3276	4.90638	.758	-8.5218	19.1770	

Note. TPKSQ = Transition Planning Knowledge and Skills Questionnaire; SDS = self-determination scores; EDBD = emotional or behavioral disorder.
* $p < .05$.

TABLE 5
Correlation Matrix

		TPKSQ Total	IEP Team	Decision Making	Goal	SDS Total	Autonomy	Self- Regulation	Psychological Empowerment
IEP team	Pearson <i>r</i>	.856**	—						
	<i>p</i>	.000	—						
Decision making	Pearson <i>r</i>	.868**	.793**	—					
	<i>p</i>	.000	.000	—					
Goal	Pearson <i>r</i>	.732**	.510**	.558**	—				
	<i>p</i>	.000	.000	.000	—				
SDS total	Pearson <i>r</i>	.347**	.408**	.289**	.278**	—			
	<i>p</i>	.000	.000	.000	.000	—			
Autonomy	Pearson <i>r</i>	.152*	.202**	.091	.183*	.940**	—		
	<i>p</i>	.048	.008	.239	.017	.000	—		
Self-regulation	Pearson <i>r</i>	.540**	.547**	.506**	.346**	.458**	.167*	—	
	<i>p</i>	.000	.000	.000	.000	.000	.030	—	
Psychological empowerment	Pearson <i>r</i>	.390**	.487**	.390**	.178*	.510**	.293**	.463**	—
	<i>p</i>	.000	.000	.000	.018	.000	.000	.000	—
Self-realization	Pearson <i>r</i>	.360**	.363**	.325**	.224**	.421**	.255**	.352**	.421**
	<i>p</i>	.000	.000	.000	.003	.000	.001	.000	.000

Note. TPKSQ = Transition Planning Knowledge and Skills Questionnaire; IEP = individualized education program; SDS = self-determination scores.
p* < .05. *p* < .01 (two-tailed).

the TPKSQ Total and SDS Total was $r = .347$, with the highest correlation between the SDS Total and TPKSQ factor scores being with the IEP Team factor ($r = .408$). The highest correlation between the TPKSQ Total and SDS subdomain scores was with the SDS Self-Regulation subdomain score ($r = .540$). Among the correlations between the SDS Subdomain scores and the TPKSQ factor scores, the correlation between the SDS Self-Regulation subdomain score and the IEP Team factor was highest ($r = .547$), suggesting that the IEP Team factor was, somehow, tapping issues pertaining to self-regulation.

Regression Analyses

To examine which predictors explained the most variance in transition planning knowledge and skills, we conducted two (Model 1 and Model 2) regression analyses with TPKSQ Total as the dependent variable and a number of variables as predictors. Table 6 provides the outcome from Model 1, with SDS Total, age, gender, student presence at the IEP meeting, and disability status entered into the model as predictor variables. The model was significant, $F(5, 151) = 7.63, p < .0001$, but accounted for a relatively modest 20% of the variance ($R^2 = .202$). As can be seen from Table 6, which provides regression statistics, only SDS Total and disability group contributed significantly to the model, with SDS Total being the strongest predictor. Because SDS Total was the strongest predictor, we ran a second regression analysis with the same independent variables, except substituting SDS subdomain scores for SDS Total. The model was again significant, $F(8, 132) = 8.94, p < .0001$, and accounted for more of the variance ($R^2 = .351$) than the previous model, about 35%. Table 6 provides regression statistics for Model 2. In this model, only SDS Self-Regulation subdomain and SDS Self-Realization subdomain scores contributed significantly to the model and, of note, disability status dropped out as a significant predictor.

We then ran regression analyses with TPKSQ factors as dependent variables. For the first such analysis, we evaluated two models (Model 1 and Model 2) for the IEP Team factor. Model 1 for this factor as dependent variable was significant, $F(5, 151) = 9.957, p < .0001$, and accounted for about 25% of the variance ($R^2 = .248$). Age, disability status, and SDS Total were significant contributors to the model, with SDS Total the strongest predictor. Model 2 converted the SDS Total to SDS subdomain scores. This model was significant, $F(8, 132) = 10.051, p < .0001$, and accounted for about 38% of the variance ($R^2 = .379$). Unlike Model 1, however, only SDS subdomain scores in Self-Regulation, Psychological Empowerment, and Self-Realization contributed to the model, as depicted in Table 6.

The same sequence of regression analyses was conducted for the Goal factor. Model 1 was significant, $F(5, 151) = 3.971, p < .002$, but only accounted for about 12% of the variance ($R^2 = .116$). Only SDS Total contributed significantly to this model. Model 2 converted SDS Total to SDS subdomain scores, and it, too, was significant, $F(8, 132) = 3.587, p < .001$, accounting for about 18% of the variance ($R^2 = .379$). Only SDS subdomain scores in Self-Regulation and Self-Realization contributed to the model, as depicted in Table 6. For the Decision-making factor, Model 1 was significant, $F(5, 151) = 6.166, p < .0001$, accounting for 17% of the variance ($R^2 = .170$). Age, disability status,

TABLE 6
Regression Statistics for Regression Analyses

Dependent Variable	Model 1					Model 2						
	Predictor Variable	B	SE B	Beta	t	p	Predictor Variable	B	SE B	Beta	t	p
TPKSQ Total	Constant	12.443	4.346		2.863	.005	Constant	3.275	4.761		0.688	.493
	SDS total	0.063	0.014	12.433	4.346		Autonomy	0.007	0.017	0.034	0.436	.664
	Age	-0.025	0.017	-0.113	-1.469	.144	Self-regulation	0.347	0.073	0.399	4.731	.000
	Gender	0.182	0.608	0.023	0.300	.765	Psychological empowerment	0.071	0.158	0.042	0.449	.654
	At IEP meeting	-0.437	0.969	-0.034	-0.451	.653	Self-realization	0.443	0.162	0.226	2.739	.007
IIEP team	Disability	0.737	0.276	0.210	2.668	.008	Disability	0.348	0.284	0.096	1.223	.224
	Age	5.685	1.898		2.995	.003	Age	-0.003	0.017	-0.015	-0.193	.847
	Gender	-0.019	0.007	-0.187	-2.501	.013	Gender	-0.173	0.604	-0.021	-0.287	.775
	At IEP meeting	0.285	0.266	0.079	1.072	.285	At IEP meeting	0.542	1.002	0.042	0.540	.590
	SDS total	-0.225	0.423	-0.039	-0.530	.597	Constant	1.807	1.992		0.907	.366
	Disability	0.252	0.121	0.159	2.087	.039	Age	-0.009	0.007	-0.098	-1.300	.196
	SDS total	0.032	0.006	0.373	5.129	.000	Gender	0.014	0.253	0.004	0.056	.956
							At IEP meeting	0.084	0.419	0.015	0.200	.842
							Disability	0.079	0.119	0.051	0.663	.508
							Autonomy	0.005	0.007	0.049	0.645	.520
							Self-regulation	0.116	0.031	0.313	3.782	.000
							Psychological empowerment	0.153	0.066	0.210	2.315	.022
							Self-realization	0.141	0.068	0.168	2.075	.040

(continued)

TABLE 6 (Continued)

Dependent Variable	Model 1					Model 2						
	Predictor Variable	B	SE B	Beta	t	p	Predictor Variable	B	SE B	Beta	t	p
Goal	Constant	2.367	1.735		1.364	.174	Constant	-0.325	2.018		-0.161	.872
	Age	-0.001	0.007	-0.017	-0.203	.839	Age	0.005	0.007	0.065	0.749	.455
	Gender	-0.231	0.243	-0.077	-0.953	.342	Gender	-0.220	0.256	-0.072	-0.858	.392
	AIIEP	-0.323	0.387	-0.066	-0.834	.406	AIIEP meeting	0.044	0.425	0.009	0.104	.918
	meeting											
Disability	Disability	0.167	0.110	0.125	1.514	.132	Disability	0.090	0.121	0.066	0.751	.454
	SDS total	0.021	0.006	0.294	3.728	.000	Autonomy	0.011	0.007	0.129	1.485	.140
							Self-regulation	0.093	0.031	0.285	2.997	.003
							Psychological empowerment	-0.035	0.067	-0.055	-0.526	.600
							Self-realization	0.134	0.069	0.181	1.948	.054
Decision making	Constant	6.502	2.320		2.802	.006	Constant	2.479	2.543		0.975	.331
	Age	-0.019	0.009	-0.163	-2.067	.040	Age	-0.009	0.009	-0.080	-1.009	.315
	Gender	0.462	0.325	0.111	1.423	.157	Gender	0.257	0.322	0.061	0.796	.428
	AIIEP	-0.203	0.518	-0.030	-0.393	.695	AIIEP meeting	0.138	0.535	0.021	0.258	.797
	meeting											
Disability	Disability	0.351	0.147	0.191	2.383	.018	Disability	0.169	0.152	0.090	1.114	.267
	SDS total	0.025	0.008	0.250	3.271	.001	Autonomy	-0.003	0.009	-0.023	-0.295	.768
							Self-regulation	0.164	0.039	0.364	4.185	.000
						Psychological empowerment	0.040	0.084	0.045	0.472	.637	
						Self-realization	0.198	0.086	0.195	2.289	.024	

Note. TPKSQ = Transition Planning Knowledge and Skills Questionnaire; SDS = self-determination scores; IEP = individualized education program.

and SDS Total contributed significantly to this model, the latter most significantly. Model 2 converted SDS Total to SDS subdomain scores, and it, too, was significant, $F(8, 132) = 7.452, p < .0001$, accounting for more of the variance, 31%, than Model 1 ($R^2 = .311$). As with Model 2 for the Goals factor, only SDS subdomain scores in Self-Regulation and Self-Realization contributed to the model (Table 6).

DISCUSSION

This study provides evidence of the importance of self-determination to the transition planning process for students with intellectual and developmental disabilities. That the average frequency correct on the 20-item TPKSQ was just less than 14 suggests that there is still a need to educate students on transition planning and its importance to their lives. A high percentage of the sample (almost 90% for whom such data were available) had attended their prior IEP meeting, but a smaller percentage of students (63% for whom such data were available) knew their transition goals, and only 61% (for whom such data were available) both had attended their last meeting and knew their transition goals; therefore, one must question the degree to which students are active participants. Martin and colleagues (Martin et al., 2004; Martin et al., 2006) have shown that, in most cases, students' roles in IEP meetings are relatively passive.

There were expected differences between students on relative self-determination and transition knowledge scores on the multivariate analysis of variance testing group differences, with students with mental retardation scoring in the least adaptive direction on both measures. That there were significant differences between students with learning disabilities and students with autism or emotional or behavioral disorders on the TPKSQ was a bit surprising, although about half of the students with autism for whom we had IQ data had concomitant intellectual disabilities, which quite likely accounts for this finding.

By and large, however, the role of disability status was less important in the regression analyses that examined models predicting transition knowledge and skills (overall) and factors from that assessment, particularly when the measure of global self-determination was replaced with measures of individual subdomains. For Model 1 analyses for TPKSQ Total and the TPKSQ factor frequency scores, global self-determination was the dominant predictor variable for all analyses (and sole predictive variable for the TPKSQ Goal factor), with disability group (TPKSQ Total, IEP Team factor, Decision-making factor) and age (TPKSQ Total, IEP Team factor, Decision-making factor) also contributing. When, in Model 2, SDS Total was replaced with SDS subdomain scores, only these subdomain scores remained as significant variables in the model: Self-Regulation and Self-Realization for the TPKSQ Total, Goal factor, and Decision-making factor analyses; and Self-Regulation, Psychological Empowerment, and Self-Realization in the IEP Team factor analysis. In all of these, self-regulation (as measured by indicators of means-end problem-solving skills and goal-setting skills), was the most significant predictor. The Arc's Self-Determination Scale weighted scores from the Autonomy section most heavily, which apparently contributed very little to the TPKSQ score (although that is probably a measurement anomaly, as not many items on the questionnaire looked at things like

knowledge about daily living or independent living activities). It is logical, though, that a student's self-regulation capacity predicts knowledge and skills. The SDS Self-Realization section measured students' self-awareness and self-knowledge, again a logical predictor of effective transition planning.

Overall, it was apparent that global self-determination and, particularly, student self-regulation and self-realization were the most important contributors to student transition planning knowledge and skills, even more so than disability status, which became irrelevant when the models included measures of component elements of self-determination and not just global self-determination. The implications for this are fairly straightforward. Experts know, from prior research, that student self-determination is improved by interventions to promote student involvement. This study shows that student self-determination contributes to a student's knowledge and skills about transition planning knowledge and skills that are critical to successful student involvement. Thus, this is a reciprocal relationship. The study's findings provide further evidence of the importance not only of involving students in educational planning, but also of providing them the capacity to more effectively participate by promoting self-determination.

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