Leisure Activity and Employment Participation of Middle-Aged and Older Adults with Down Syndrome

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INTRODUCTION

The life expectancy for individuals with Down syndrome (DS) has increased from 9 years to almost 60 years over the past century. There is now a critical need to understand the daily lives of adults with DS in middle (i.e., 30s – 40s) and older (i.e., 50s and beyond) adulthood and to identify factors that facilitate or hinder adaptive outcomes.

STUDY AIMS

1. Examine leisure activity participation in *active*, *social*, *mentally-stimulating*, and *passive* domains.
2. Evaluate the association between participation in leisure activity and employment and co-occurring emotional and behavior problems, residence, caregiver involvement, and time spent in employment or adult day programming.

METHOD

- 62 Caucasian adults with DS (58.1% male) aged 30-53 years (*M* = 37.82, *SD* = 7.46) with mean mental age of 5.35 years (*SD* = 1.36), and their caregivers, aged 22-85 years (*M* = 62.98, *SD* = 11.50). Caregivers were largely parents (88.7%), siblings (3.2%).
- Sample is from an ongoing longitudinal study at University of Wisconsin – Madison and University of Pittsburgh.
- Caregivers completed all measures:
  - Socio-demographics, residence, and involvement.
  - Reiss Screen for Maladaptive Behaviors (Reiss, 1994).
  - Leisure activity (Jopp & Hertzog, 2007).
  - Employment (Taylor & Seltzer, 2012).

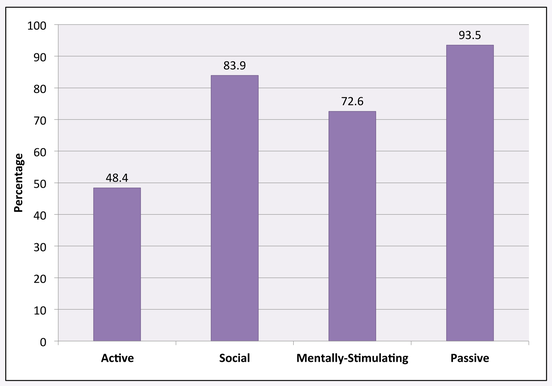
TABLE 1. Correlations

Variable	1	2	3	4	5	6	8	9	10
Socio-dem									
1. Age	--								
2. MA	**-.33***	--							
Predictors									
3. Co-EBP	.04	-.07	--						
4. Resid	-.03	-.12	-.24	--					
5. Involve	-.09	-.16	-.25	**.84****	--				
Employ									
6. HrProg	-.07	-.06	.15	**-.28***	-.19	--			
7. Indep	-.23	.16	-.23	-.03	-.05	**.26***			
Leisure									
8. Active	-.16	.09	-.22	-.03	.12	-.19	--		
9. Social	-.18	**.27***	-.24	-.01	.13	-.07	**.48****	--	
10. Mental	-.19	**.36****	-.21	.06	.15	.02	.21	**.54****	--
11. Passive	.23	.15	-.15	-.10	-.10	**-.31***	.08	.19	-.00

TABLE 2. Frequency of Participation in Each Domain of Leisure Activity

Leisure Activity Items	Daily	2-3x Week	1x Week	1x Month	1x Year	Never
Active						
Exercise	8.1	16.1	21.0	24.2	16.2	14.5
Rec. sports	3.2	9.7	37.1	22.6	19.3	8.1
At Least 1 Activity	16.1	48.4	71.0	88.7	98.4	100.0
Mentally-Stimulating						
Knowledge games	17.7	4.8	8.1	19.4	16.1	33.9
Read for leisure	27.4	9.7	11.3	9.7	1.6	40.3
At Least 1 Activity	53.2	72.6	80.6	96.8	98.4	100.0
Social						
Visit with friends	1.6	19.4	30.6	38.7	8.0	1.6
Talk friend, phone	19.4	14.5	9.7	30.6	14.6	11.3
At Least 1 Activity	83.9	93.5	96.8	98.4	98.4	100.0
Passive						
Watch TV com/adv	79.0	8.1	6.5	3.2	0.0	3.2
Watch news	37.1	19.4	9.7	14.5	6.4	12.9
At Least 1 Activity	83.9	93.5	96.8	98.4	98.4	100.0

FIGURE 1. Percentage Participating in *At Least One* Leisure Activity *2-3 Times a Week*



KEY FINDINGS

- Significant difference in participation in *at least one* leisure activity at least *2-3 times a week* across domains (F [3, 59] = 14.17, $p < .01$, $\eta_p^2 = .42$).
- More likely to engage in at least one *passive* activity than at least one *mentally-stimulating* activity (t (61) = 3.20, $p = .002$) or *active* activity (t (61) = 6.01, $p < .001$).
- More likely to engage in *at least one social* activity than *at least one active* leisure activity (t (61) = 5.42, $p < .001$).
- More likely to engage in *at least one mentally-stimulating* activity than *at least one active* activity (t (61) = 3.08, $p = .003$).

TABLE 3. Multiple Regressions for *Active* and *Social* Leisure

	Active				Social			
	B	SE B	β	*p*	B	SE B	β	*p*
Constant	-5.34	13.74		0.70	9.95	18.40		0.60
MA	0.41	0.85	0.06	0.63	2.27	1.13	0.27	**0.05***
Co-EBP	-5.29	2.69	-0.25	0.06	-5.87	3.61	-0.21	0.11
Resid	-10.98	3.84	-0.59	**0.01****	-7.77	5.14	-0.32	0.14
Involve	7.78	2.72	0.59	**0.01****	7.37	3.64	0.43	**0.05***
HrProg	-8.03	5.29	-0.19	0.14	-3.28	7.08	-0.06	0.65
R^2	0.16				0.11			
F	3.22				2.45			
p-value	**0.01****				**0.05****			

TABLE 4. Multiple Regressions for *Mentally-Stimulating* and *Passive* Leisure

	Mentally-Stimulating				Passive			
	B	SE B	β	*p*	B	SE B	β	*p*
Constant	22.84	34.53		0.51	28.90	11.30		**0.01***
MA	5.80	2.13	0.37	**0.01***	0.39	0.70	0.07	0.58
Co-EBP	-5.01	6.78	0.10	0.46	-3.67	2.22	-0.21	0.10
Resid	-2.99	9.68	0.07	0.76	-4.74	3.16	-0.31	0.14
Involve	6.59	6.83	0.21	0.34	0.82	2.23	0.08	0.70
HrProg	8.69	13.31	0.09	0.52	-12.45	4.35	-0.37	**0.01****
R^2	0.07				0.14			
F	1.85				2.95			
p-value	0.12				**0.02****			

KEY FINDINGS

- *Active* leisure model was significant (F (5,53) = 3.22, $R^2 = .16$, $p = .01$), with residence (β = -.58, $p = .01$) and caregiver involvement as significant predictors. Severity of co-occurring emotional and behavior problems (β = -.25, $p = .06$) had trend level significance.
- *Social* leisure model was significant (F (5,53) = 2.45, $R^2 = .11$, $p = .05$), with mental age (β = .27, $p = .05$) and caregiver involvement (β = .43, $p = .05$) as significant predictors.
- *Mentally-stimulating* leisure model was not significant (F (5,53) = 1.85, $R^2 = .07$, $p = .12$), with only mental age (β = .37, $p < .05$) as a significant predictor.
- *Passive* leisure model was significant (F (5,53) = 2.95, $R^2 = .14$, $p = .02$), $p = .02$) and number of hours in employment or adult day programs (β = -.37, $p = .01$) as a significant predictor.
- Level of independence in employment had a negative trend-level association with co-occurring emotional and behavior problems (β = -.23, $p = .06$).

IMPLICATIONS

- Middle-aged and older adults with DS frequently participate in *passive* (e.g., watching television) and *social* leisure activities, with lower participation in *mentally-stimulating* and *active* leisure activities.
- Need to educate caregivers and adults with DS on how to engage in *mentally-stimulating* leisure (e.g., games and reading) and increase supports aimed at promoting physical activity.
- Co-occurring emotional and behavior problems may inhibit middle-aged and older adults with DS from engaging in *active* leisure to their full potential.
- Family members play a key role in promoting and facilitating *active* and *social* leisure activity for middle-aged and older adults with DS, regardless of their residential location.
- Less time spent weekly in employment and adult day programs is associated with more time spent in *passive* leisure activity.
- Need for supports and services geared towards structuring leisure activities and educating middle-aged and older adults with DS, and their caregivers, on how to engage in more *active*, *social*, and *mentally-stimulating* leisure activity.

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