

Developmental Trajectory of Depressive Symptoms across Adolescence among Taiwanese Adolescents

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Literature Review

- No studies explored the longitudinal associations between parenting behaviors and development of depressive symptoms.
- Different effects of parenting: Parental Monitoring, warmth, and harsh discipline
- Monitoring and Warmth in the context of Chinese culture
- Gender differences in these associations

Methods

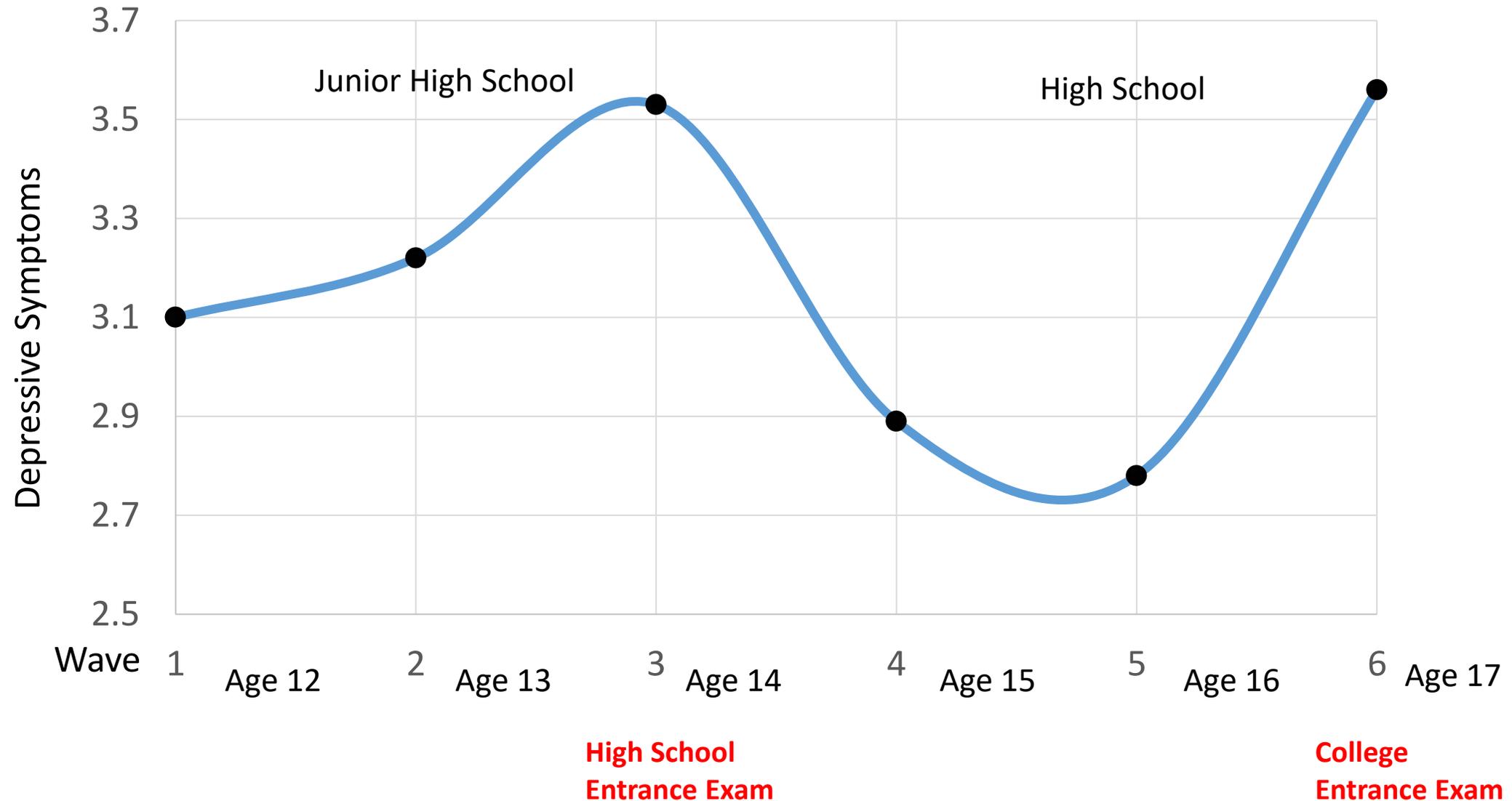
Sample:

- 2,690 adolescents in Taiwan Youth Project (TYP)
- 6 waves: 2000, 2001, 2002, 2003, 2004, and 2005 (7th to 12th grades)

Analytical Strategies:

- Latent Growth Curve Model (LGM)
- Measurement Invariance for model comparisons

Results: Depressive Symptoms across 6 years



Results: Best Fitting LGM

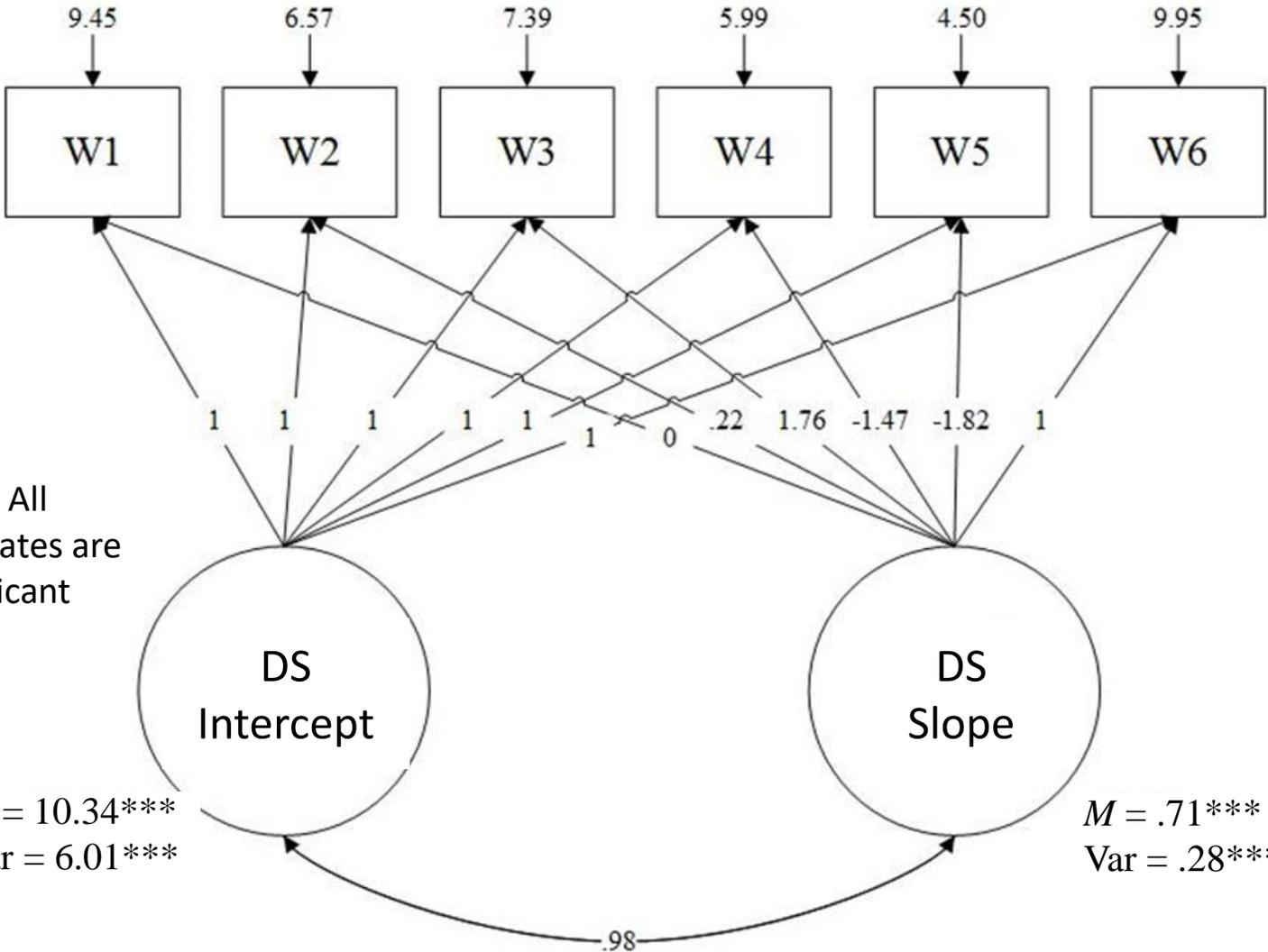
	Freely estimate Model	Linear Model	Quadratic Model
χ^2	169.13	1593.69	--
df	12	16	--
RMSEA	.042	.186	--
CFI	.95	.58	--
NFI	.94	.58	--
IFI	.95	.58	--
	Slope: 0,-,-,-,1	Slope: 1,2,3,4,5,6	Slope 1: 1,2,3,4,5,6 Slope 2: 1,4,9,16,25,36

To explore the best LGM for developmental trajectories of adolescent DS, model comparisons were conducted.

Freely estimate model (unspecified) was better than linear and quadratic models

Note. Cubic model is limited to current waves

Results: Unconditional LGM



Note. All estimates are significant

$M = 10.34^{***}$
 $Var = 6.01^{***}$

$M = .71^{***}$
 $Var = .28^{***}$

Fixed effect:

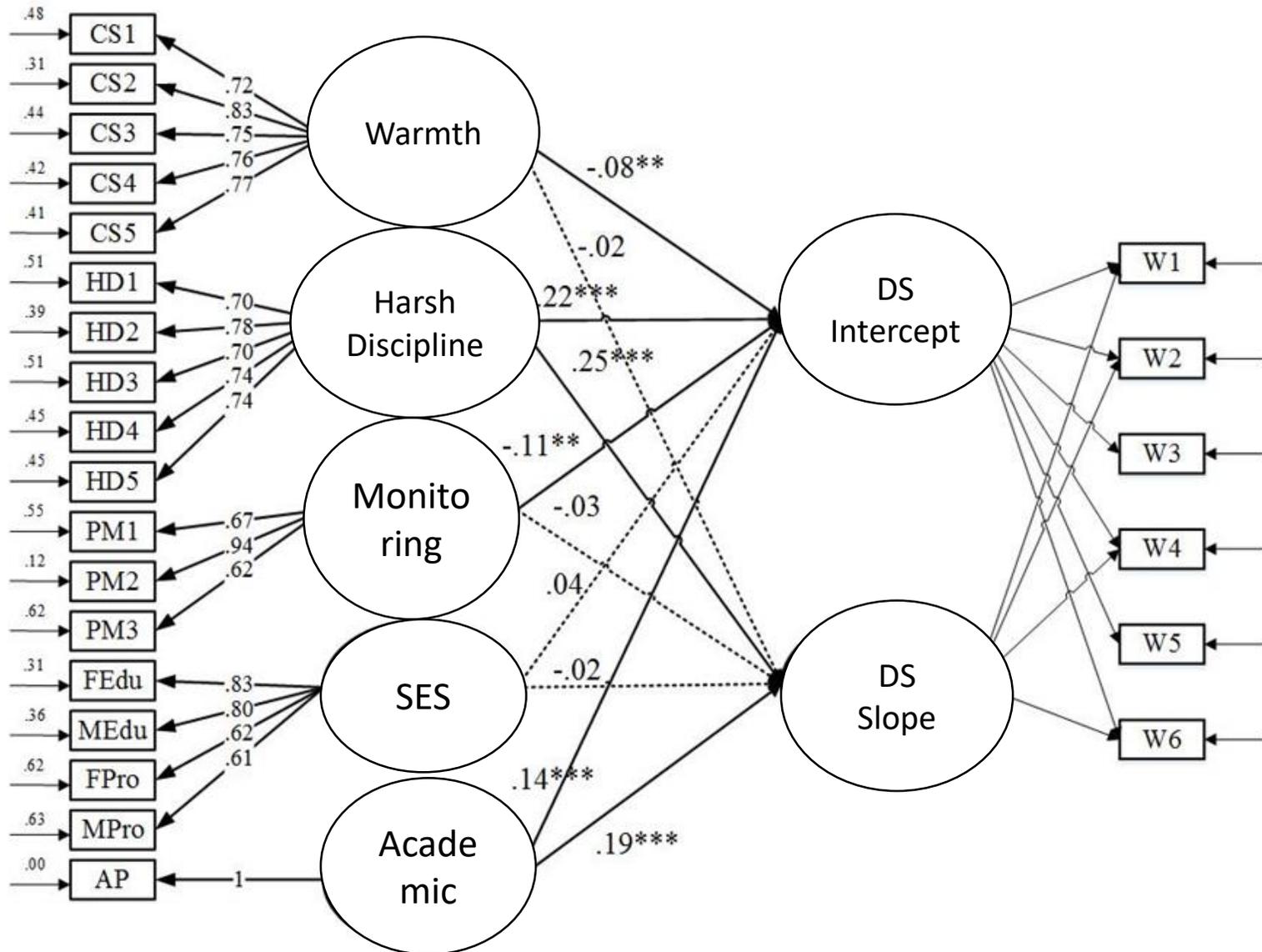
Adolescents' average scores on DS were 10.34, followed by annual increases of 0.71

Random effect:

Individual differences in DS scores at baseline ($b = 6.01$) and during six years (0.28)

$\chi^2 = 379.76$; $RMSEA = .047$; $CFI = .97$

Results: Conditional LGM



Parental Warmth and Monitoring predicted fewer DS at baseline

Harsh discipline predicted higher levels of DS at baseline and stronger increases in DS over 6 years

Besides, those with better academic performance tend to show more severe DS

Results: Measurement Invariance

- Step1: Independent Models for male and female adolescents

- Step2: Baseline model and Fixed loading model

- Step3: Model Comparisons

$\Delta\text{NFI}、\Delta\text{IFI} < .05; \Delta\text{CFI} < .01$

- In sum, fixed model and baseline model showed no difference, allowing further coefficient paths comparisons

Comparison	χ^2	df	RMSEA	CFI	NFI	IFI	ΔCFI	ΔNFI	ΔIFI
Male	149.70	59	.050	.98	.97	.98	--	--	--
Female	136.30	59	.045	.99	.97	.99	--	--	--
Baseline	1685.36	474	.031	.94	.93	.95	--	--	--
Fixed loading	1787.12	491	.031	.94	.92	.94	.004	.005	.004

Results: Gender Differences

<i>Coefficient Paths</i>	Females	Males	Equality Model	Difference
	estimates	estimates	estimates	$\Delta\chi^2$
Harsh to DS intercept	.34***	.22***	-.24***	5.41*
Monitor to DS intercept	-.40***	-.15*	.26***	4.87*
Academic to DS intercept	.49***	.12*	.33***	130.32***

Only 3 paths had significant gender differences:

1. Harsh discipline had greater impacts on DS for females than males
2. Parental monitoring had greater impacts on DS for females than males
3. Academic performance had greater impacts on DS for females than males

Discussion

- Adolescent Depressive Symptoms follow a non-linear trajectory from early to late adolescence
 - This developmental trajectory is subject to education systems in Taiwan
- Depressive Symptoms exacerbated over time: those high in baseline tend to show greater increases
- Harsh Discipline is the most predictive indicator of Depressive Symptoms, while parental monitoring and warmth also contribute to fewer depressive symptoms at baseline.
- Female Adolescents are more vulnerable to the detrimental effects of harsh discipline and academic performance; however, they also benefit more from parental monitoring.

Limitations

- Future studies may explore the heterogeneity of adolescent depressive symptoms
- We only examined the parenting at baseline, despite parenting behaviors could change along with adolescent development
- Mediation and Moderation may exist between parenting and depressive symptoms

The End

Thank you for listening!