

한국형 비행 청소년 정신병리 선별척도인 MAYSI-2K  
(Massachusetts Youth Screening Instrument-2  
Korean)의 표준화를 위한 예비연구\*

A PRELIMINARY STUDY FOR STANDARDIZATION OF THE MAYSI-2K  
(MASSACHUSETTES YOUTH SCREENING INSTRUMENT-2  
KOREAN) IN KOREAN DELINQUENT YOUTHS

권용실\*\*† · 이지현\*\*\* · 이해국\*\* · 이정태\*\* · 김선경\*\*

Yong Sil Kweon, M.D.,\*\*† Ji-Hyun Yi, M.A.,\*\*\* Hae Kook Lee, M.D.,\*\*  
Chung Tai Lee M.D.,\*\* Sun Kyung Kim, M.D.\*\*

목적 : 한국형 비행 청소년 정신병리 선별척도인 MAYSI-2(Massachusetts Youth Screening Instrument)의 표준화를 위한 예비연구를 실시하였다.

방법 : 119명의 비행 청소년이 MAYSI-2K와 K-YSR(Korean-Youth Self Report)을 작성하였다.

결과 : MAYSI-2K의 Cronbach's α는 .756, K-YSR의 Cronbach's α는 .714였다. MAYSI-2K과 K-YSR의 상관관계는 .62(r = .62, p < .0001)였다.

결론 : MAYSI-2K가 한국형 비행 청소년 정신병리 선별척도로서 유용할 것으로 보인다.

중심 단어 : MAYSI-2K, 비행 청소년, 선별척도.

서 론

\* 2003년 2월 14일 접수  
\*\*가 : Department of Psychiatry, College of Medicine, The Catholic University of Korea, Seoul  
... : Department of Psychiatry, Inha University Hospital, Incheon  
† : 480-130, Incheon  
: (031) 820-3032 · : (031) 847-3630 · E-mail : yskwn@catholic.ac.kr

가 18~22% <sup>6)14)</sup>

가 (41~90%),

1998 32.8%가 (25~50%), (19~78%),

1994 21.4% 가 , (19~46%) (17~53%), (19~

3 1994 3.4% 1998 78%), (32%) <sup>14)</sup>

9.4% 3 가 가 <sup>1)</sup>

67% 가

2) 가

(parens patriae) 가 (dec-

3-5) sion making)

6)

8)15) 가

가

6)7) 가

(2001)<sup>7)</sup> 가

가가 가 가

가 가 가

가 가 가

가 가 가

가 가 가

가 가 가

가 가 가

8)9) 가

15)

70~80%

45~50%

8-13)

MAYSI - 2K

MAYSI - 2  
(Massachusetts Youth Screening Instrument - 2)<sup>16)</sup>

2. 평가도구  
1) MAYSI-2K(Massachusetts Youth Screening Instrument-2 Korean)  
MAYSI - 2K

가  
가

1. 연구대상

2001 7 12  
12 17  
가

MAYSI - 2K 가 (Ko-  
rean - Youth Self Report, K - YSR)<sup>17)</sup> 가  
190 가 (17 ) Grisso Barnum(1996) 1) 10  
가 ;2) 가  
, MAYSI - 2K '0' ;3) ;4)  
가 (14 ) K- ;5)  
YSR ;6) , 가 ;7)  
(40 ) 119  
MAYSI  
MAYSI - 2<sup>16)</sup> . MAYSI -

Table 1. Definition of MAYSI-2 scales\*

Scale label	Definition
<i>Alcohol/drug use</i>	: Frequent use of alcohol/drugs : Risk of substance abuse or psychological reaction to lack of access to substances
<i>Angry-irritable</i>	: Experiences frustration, lasting anger, moodiness : Risk of angry reaction, fighting, aggressive behavior
<i>Depressed-anxious</i>	: Experiences depressed and anxious feeling : Risk of impairment of motivation, need for treatment
<i>Somatic complaints</i>	: Experiences bodily discomforts associated with distress : Risk of psychological distress not otherwise evident
<i>Suicidal ideation</i>	: Thoughts and intention to harm oneself : Risk of suicide attempt or gestures
<i>Thought disturbances</i>	: (boys only) Unusual belief and perceptions : Risk of thought disorder
<i>Traumatic experiences</i>	: Lifetime exposure to traumatic events(e.g., abuse, rape, observed violence) : Risk of trauma-related instability in emotion/perception

\* : MAYSI-2, User's manual and technical report<sup>16)</sup>

2K  
52  
(Alcohol/Drug Use),  
(Angry - Irritable),  
(Depressed/Anxious).  
(Somatic Complaints),  
(Suicidal Idea-  
tion),  
(Thought Disturbance),  
(Trau-  
matic Experiences) 7  
6 가  
가  
가 (caution)  
(warning)  
가 가  
(Table 1).  
MAYSI - 2K

2  
2) 한국판 청소년 자기행동 평가척도(Korean-Youth Self Re-  
port, K-YSR)<sup>17)</sup>  
K - YSR Achenbach<sup>18)</sup>

가  
가  
(Social Competence scale) 112  
(Behavior Competence  
scale)

8  
가

3. 자료분석  
MAYSI - 2 52  
(Cron-  
bach's Alpha)  
51 가

**Table 2.** Demographic and offense variables of the sub-  
jects

	Variable	Number(%)
School(N=92)	Middle school	7( 7.6)
	High school	43(46.7)
	Not-student(drop-out)	39(42.4)
	Others	3( 3.3)
SES(N=107)	Upper	3( 2.8)
	Middle	52(48.6)
	Low	52(48.6)
Family(N=106)	Both parents	63(59.4)
	Single parent	35(33.0)
	Other family	8( 7.5)
Current offense (N=92)	Major crime (felony)	16(17.4)
	Minor crime	27(29.3)
	Property	31(33.7)
	Drug related	2( 2.2)
	Traffic related	16(17.4)
No. of previous offense(N=92)	None	69(75.0)
	1	15(16.3)
	2	4( 4.3)
	Above 3	4( 4.3)
Gang	Yes	56(64.4)
	No	31(35.6)

4  
K - YSR  
Windows SAS  
Lisrel  
SPSS 10.0

**결 과**

1. 인구 통계학적 특성 및 비행력  
16 ( 1.07)  
46.7% 가  
42.4%  
(48.6%)  
59.4%, 가 33.0%,

MAYSI - 2K

가 가 7.5% . 16  
 가 33.7%, 가  
 29.3% 1 가 MAYSI - 2  
 24.9% 64.4%  
 (Table 2).

2. MAYSI-2K 요인분석 결과

MAYSI - 2K 52 33 , 37 , /  
 8 가 /

**Table 3.** Factor analysis for each subscale of the MAYSI-2K in comparison with the original MAYSI-2

Subscale	Item number									Cronbach	Factor loadings
ADU	10	19	23	24	40	45				0.643	1.540
AI	2	6	7	13	<u>35</u>	39	42	44		0.703	1.861
DA	3	14	17	21	34	<u>35</u>	41	<u>47</u>	<u>51</u>	0.609	1.545
SC	27	28	29	30	31	43				0.756	2.153
SI	11	16	18	22	<u>47</u>					0.721	1.859
TD	9	20	25	26	32					0.344	0.520
TE_B	46	48	49	51	52					0.142	0.357

ADU : Alcoho/drug use, AI : Angry-irritable, DA : Depressed/anxious, SC : Somatic complaints, SI : Suicide ideation, TD : Thought disturbance, TE\_B : Traumatic experiences\_boy, \_ : Items have multiple loadings

**Table 4.** Confirmatory factor analysis

Subscale	Chi-square	RMSEA	GFI	AGFI	NFI	NNFI
ADU	29.68***	0.140	0.92	0.82	0.73	0.64
AI	30.55	0.067	0.94	0.89	0.77	0.85
DA	33.93	0.047	0.94	0.90	0.73	0.92
SC	32.73***	0.149	0.92	0.80	0.82	0.77
SI	12.84*	0.115	0.96	0.87	0.91	0.87
TD	5.99	0.041	0.98	0.94	0.73	0.81
TE_B	6.42	0.049	0.98	0.94	0.50	-0.01

ADU : Alcoho/drug use, AI : Angry-irritable, DA : Depressed/anxious, SC : Somatic complaints, SI : Suicide ideation, TD : Thought disturbance, TE\_B : Traumatic experiences\_boy # goodness of fit statistic, Chi-square : not-significant, RMSEA (room mean square residual) : <.05, GFI (goodness of fit index), AGFI (adjusted goodness of fit index), NFI (normed fix index), NNFI (non-normed fix index) : >.90, \* : p<.05, \*\* : p<.01, \*\*\* : p<.001

**Table 5.** Correlations of MAYSI-2K scales with scales of K-YSR

	With-drawal	Somatic complaints	Anxious-depressed	Social problems	Thought problems	Attention problems	Delinquent behavior	Aggressive behavior	Self-Destructive prob.
ADU	.12	.22*	.26**	.11	.23*	-.05	.31**	.30**	.24*
AI	.45***	.15	.53***	.37***	.38***	.25*	.50***	.48***	.57***
DA	.42***	.35***	.61***	.35***	.33***	.37***	.49***	.40***	.62***
SC	.43***	.53***	.46***	.12	.37***	.29**	.29**	.15	.47***
SI	.40***	.24*	.51***	.35***	.31**	.28**	.30**	.29**	.48***
TD	.18	.28**	.29**	.14	.32***	.09	.17	.13	.27**
TE_B	.25**	.24*	.32***	.11	.33***	.15	.30**	.26**	.37***

DU : Alcoho/drug use, AI : Angry-irritable, DA : Depressed-anxious, SC : Somatic complaints, SI : Suicide ideation, TD : Thought disturbance, TE\_B:Traumatic experiences underlying figures indicate correlations between conceptually parallel scales, \* : p<.05, \*\* : p<.01, \*\*\* : p<.001

가 1  
(Cronbach's )  
( =.142) ( =.344)가  
.609 .756 (Ta-

## 고 찰

ble 3).  
10)12)19-22)  
23)24)  
6)20-22)  
Kroll 11)  
1 3  
(Confirmatory factor analysis)  
/ , / ,

(Table 4).

### 3. 검사-재검사 신뢰도

- 10  
41 51 가 가  
. 51 가  
12.25( 9.82),  
11.22( 9.12) , MA-  
YSI - 2K 0.84 (p<.0001) 가 가  
MAYSI - 2K 가  
15)25)

### 4. 타당도 검사

MAYSI - 2K  
K - YSR MAYSI - 2K  
MAYSI - 2가<sup>26-28)</sup>  
가 . MAYSI - 가  
2K / K - YSR / 가  
(.62) / (.61), K - YSR 42.4% ,  
(.53), K - YSR ,  
(.32), K - YSR / (.51) 40%  
/ (.48), / K - YSR 29)  
(.31) (.30), / K - YSR 가 ,  
/ (.57) / (.53), K - 가  
YSR / (.37) 가  
(Table 5). 가 30),

MAYSI - 2K

가 31) , “ ” ‘ ,

25% MAYSI - 2K K - YSR  
32.8%<sup>1)</sup> 44% MAYSI - 2K  
32) 가 YSR / , , K -

MAYSI - 2K 52 16 MAYSI - 2K 가 K -  
MAYSI - 2 7 YSR / /  
52 Grisso<sup>15)</sup>  
(119 ) 가

MAYSI - 2 가 MAYSI - 2K가  
가 가  
/ , / , 가

가 가  
( 9, 20, 26) 가  
( 25, 32) 가

가 가  
MAYSI - 2 가  
16) 가

6)23)24)

**결 론**

5 가  
( 46), ‘ MAYSI - 2  
( 51) 가  
/ , /

MAYSI - 2K  
MAYSI - 2K

가

### References

- 1) 문화관광부. 청소년 백서. 서울: 문화관광부 청소년국;1999.
- 2) 김준호, 이순래. 소년범죄자의 성인범죄자로의 전이에 대한 연구. 서울: 한국형사정책연구원;1995.
- 3) Halikias W. Forensic evaluation of adolescents: psychosocial and clinical considerations. *Adolescence* 2000;35(139):467-484.
- 4) Bonnie RJ, Grisso T. Adjudicative competence and youthful offenders. In: Grisso T, Schwartz RG, editors. *Youth on trial*. Chicago: University of Chicago press;2000. p.73-103.
- 5) McCrone S, Shelton D. An overview of forensic psychiatric care of the adolescent. *Issues Mental Health Nursing* 2001;22:125-135.
- 6) Kazdin A. Adolescent development, mental disorders, and decision making of delinquency of youths In: Grisso T, Schwartz RG, editors. *Youth on trial*. Chicago: University of Chicago press;2000. p.33-66.
- 7) Arroyo W, Buzogany W, Hansen G, McMiller W, Myers W, Little D, Fallon T, Kessler C, Dawson D, Goldberg P. AACAP task force on juvenile justice reform: recommendation for juvenile justice reform. Washington, DC: AACAP;2001.
- 8) Steiner H, Kaufmann E. Juvenile justice, delinquency, and psychiatry. *Child Adolesc Psychiatr Clin N Am* 1998; 7(3):653-672.
- 9) 임상규. 소년법상의 보호정신. *교정연구* 2002;15:31-65.
- 10) Bickel R, Campbell A. Mental health of adolescents in custody: the use of the 'adolescent psychopathology scale' in the Tasmanian context. *Aust NZ J Psychiatry* 2002;36:603-609.
- 11) Kroll L, Rorhwell J, Bradley D, Shah P, Bailey S, Harrington RC. Mental health needs of boys in secure care for serious or persistent offending: a prospective, longitudinal study. *Lancet* 2002;359(9322):1975-1979.
- 12) Wasserman GA, Mercynolds LS, Lucas CP, Fisher P, Santos L. The voices DISC-IV with incarcerated male youths: Prevalence of disorder. *J Am Acad Child Adolesc Psychiatry* 2002;41(3):314-321.
- 13) Shelton D. Emotional disorders in young offenders. *J Nurs Scholarsh* 2001;33(3):259-263.
- 14) Costello EJ. Developments in child psychiatric epidemiology. *J Am Acad Child Adolesc Psychiatry* 1989;28(3):836-841.
- 15) Grisso T, Barnum R, Fletcher KE, Cauffman E, Peuschold D. Massachusetts youth screening instrument for mental health needs of juvenile justice youths. *J Am Acad Child Adolesc Psychiatry* 2001;40(5):541-548.
- 16) Grisso T, Barnum R. Adolescent youth screening instrument second-version: Users manual and technical report. Worcester: University of Massachusetts Medical School; 2000.
- 17) 오경자, 하은혜, 이혜련, 홍강의. K-YSR 청소년 자기행동 평가척도. 서울: 중앙적성출판사;2001.
- 18) Achenbach T. Manual for the youth self-report and 1991 profiles. Burlington: University of Vermont;1991.
- 19) Doreleijers TAH, Moser F, Thijs P, England H, Beyaert FLH. Forensic assessment of juvenile delinquents: prevalence of psychopathology and decision-making at court in the Netherlands. *J Adolesc* 2000;23:263-275.
- 20) Vermeiren R, Clippele D, Deboutte D. A descriptive survey of Flemish delinquent adolescents. *J Adolesc* 2000;23:277-285.
- 21) Teplin LA, Abram KM, McClelland GM, Dulcan MK, Nericle AA. Psychiatric disorders in youth in juvenile detention. *Arch Gen Psychiatry* 2002;59:1133-1149.
- 22) Domalanta DD, Risser WL, Roberts RE, Risser JMH. Prevalence of depression and other psychiatric disorders among incarcerated youths. *J Am Acad Child Adolesc Psychiatry* 2003;40(5):541-548.
- 23) Steiner H, Garcia IG, Mathews Z. Posttraumatic stress disorder in incarcerated juvenile delinquents. *J Am Acad Child Adolesc Psychiatry* 1997;36(3):357-365.
- 24) Ruchkin VV, Schwab-Stone M, Kuposov R, Vermeiren R, Steiner H. Violence exposure, posttraumatic stress, and personality in juvenile delinquents. *J Am Acad Child Adolesc Psychiatry* 2002;41(3):322-329.
- 25) Dembo R, Schmeidler J, Borden P, Turner G, Sue CC, Manning D. Examination of the reliability of the



## MAYSI - 2K

- problem oriented screening instrument for teenagers (PO-SIT) among arrested youths entering a juvenile assessment center. *Subst Use Misuse* 1996;31(7):785-824.
- 26) Stewart DG, Trupin EW. Clinical utility and policy implication of a statewide mental health screening process for juvenile offenders. *Psychiatr Serv* 2003;54(3):377-382.
- 27) Research and Training Center on Family Support and Children's Mental Health. Mental health screening instruments for use in juvenile justice. 2003 Feb.10 Available from URL: <http://www.rtc.pdx.edu/DataTrends/pgDT55.shtml>
- 28) Rosado L. Serving the mental needs of youth in the juvenile justice system. 2003 Feb.10 Available from URL: [http://www.jlc.org/home/updates/updates\\_links/JjmhYOUTH.html](http://www.jlc.org/home/updates/updates_links/JjmhYOUTH.html)
- 29) Henggeler SW. *Delinquency in Adolescence*, London: Sage Publications:1989. p.83-94.
- 30) 정선주, 서동혁, 함봉진, 조성진, 한창환, 류인균 등. 구속된 비행청소년들의 기질 및 성격차원, 가정환경요인과 반사회적 인격 특성간의 관계. *신경정신의학* 2002;41(4):670-680.
- 31) 김현수, 김현실. 재범 비행 청소년의 예측인자 분석. *신경정신의학* 2001;40(2):279-290.
- 32) 서동혁, 정선주, 손창호, 김원식, 고승희, 함봉진 등. 구속된 비행 청소년들의 석방 후 6개월 이내 재범의 예측요인. *신경정신의학* 2001;40(3):463-476.

### ABSTRACT

*Korean J Child & Adol Psychiatr* 14 : 238~246, 2003

## A PRELIMINARY STUDY FOR STANDARDIZATION OF THE MAYSI-2K (MASSACHUSETTES YOUTH SCREENING INSTRUMENT-2 KOREAN) IN KOREAN DELINQUENT YOUTHS

Yong Sil Kweon, M.D., Ji-Hyun Yi, M.A., Hae Kook Lee, M.D.,  
Chung Tai Lee M.D., Sun Kyung Kim, M.D.

*Department of Psychiatry, College of Medicine, The Catholic University of Korea, Seoul*

**Objectives** : Mental health problems have been found to be more common among juvenile delinquents. This report assessed the reliability, and validity of the MAYSI-2K (Massachusetts Youth Screening Instrument-2 Korean) in Korean delinquents to examine the utility as a screening measure.

**Methods** : The study consisted of 119 male juvenile youths (mean age 16) who admitted in the probation & detention office. They completed an assessment battery including MAYSI-2K and K-YSR (Korean-Youth Self Report) upon entry. Factor analysis, reliability test, and validity test were conducted.

**Results** : The results of factor analysis represented 14 factors which showed more factor structures in comparison with published factor loadings of 7 in the MAYSI. In factor analysis according to the each subscale of the MAYSI, the internal coefficients of 7 subscales ranged from .142 to .756. Test-retest reliability revealed significant correlations ( $r = .84$ ). There were significant correlations among subscales of MAYSI-2K and K-YSR.

**Conclusion** : Our findings suggested that MAYSI-2K might be a useful screening measure. But further studies with extended number of subjects and culturally appropriate items are required for clinical utility of the MAYSI-2K in Korean delinquents.

**KEY WORDS** : Delinquents · Psychopathology · MAYSI-2K.