

# 우리나라 호흡기계질환의 역학조사에 사용되는 설문지의 신뢰도 분석 연구

- 일부 치과기공사를 대상으로 -

광일치과기공소

*Abstract*

## **A Study on Analaysis of Relialality to Korean version Quesionaties on Respiratory Symptoms in Korea - For the response to dental technician Laboratory -**

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The study was performed to compare the raliability of two Korean version questionaires for respiratory symptoms and illness being used in Korea. The subjects were 103 dental laboratory technician who divided into two groups as SUN-81-AL and SUN-93.

The duration of test-retest was one two month.

The differences between two groups interms of average age, height, and weight were negligible.

The SUN-93 showed higher agreement compared to SUN-81-AL except items cough and smoking.

The Sun-93 deserved to prefer to be used in respiratory epidemiologic study

# 1. 서론

방법 평가	設問 設問	妥當性	適用 比較 再現性
<p>                     肺機能                      検査, 設問調査,                      (Lebowitz, 1991),                      方法                      查 肺機能検査                      肺機能検査                      患 診断                      (Ferris, 1978: American Thoracic Society, 1991).                      肺機能検査                      理解 協助가                      設問調査法 (健康調査                      , 1993),                      設問紙                      診断名                      人口集團                      對象者 健康問題                      補助手段                      . ( , 1980)                      適用                      解釋 設問                      設問                      問題視                      獨自的 設問作成 適用                      比較性                      問紙                      , 1982).                      )                      1950年代 系                      設問調査書 標準化                      改善 가                      標準設問紙가                 </p>	<p>                     設問紙                      medical index                      1951),                      , 1960)                      Thoracis Society, ATS)                      紙 (ATS-DLD-78, 1978)                      設問                      , 가 , , ,                      , , 가                      가), 設問持                      文化 生活樣式 人種                      設問內容                      가?)                      ( , 가                      가                      , 1980).                      外國 開發 標準化 設問                      保健醫療 行態                      用性 가                      化가                      MRC ATS-DLD-78                      設問 妥當性 再現度                      DLD-78                      (SNU-81-AL)                      .                      ATS-DLE-78                      設問(SNU-93                      )                      .                      SNU-81-AL                      問紙 妥當性 再現度                      SUN-93 面接方式用                 </p>	<p>                     設問(CMI                      Medical Research Council                      設問紙(MRC                      (American                      Thoracis Society, ATS)                      設問                      가                      CMI, MRC                      ATS                      外國 開發                      質問 妥當性( ,                      質問                      社會文化                      生活樣式 人種                      設問內容                      質問                      가?)                      가                      . ( )                      外國 開發 標準化 設問                      有                      設問標準                      (1982) CMI,                      ATS-                      設問                      (1993)                      SNU-81-AL                      )                      )                      設                 </p>	

## II. 연구내용 및 방법

疫學調查	設問紙	1. 연구재료	
	目的 教育水準	(1)	
	(self-administration)	(1982)	設問紙(SNU-81-設問紙
設問紙		AL) (1993)	Table 1
		(SNU-93)	
		SNU-81-AL	SNU-93

Table 1. Content of the SNU-81-AL and SNU-93 questionnaire

Content	SNU-81-AL	SNU-93
기침(cough)	3(6)	2(4)
담, 가래(phlegm)	3(6)	3(5)
숨쉴때 소리, 쌕쌕소리(wheezing)	2(3)	1(3)
콧물, 코감기(nasal catarrh)	2(3)	—
숨참, 숨헐떡임(breathlessness)	2(5)	2(5)
기후 영향(effect of wealth)	1	—
숨차거나 가스 답답함	—	5(6)
가슴병, 폐질환(chest illness)	1(4)	4
과거 질환 경력(past illness)	5	6
직업에 관하여	2(13)	—
담배 피우는 것에 관하여 = 흡연	3(12)	3(9)
부모의 폐질환에 관하여	5	—
과거에 살았던 곳	—	1(4)
주거환경	4	4
키와 몸무게	—	1
학 력	—	1
계	33(67)	33(52)

\* ( ) 설문지 보충질문

(2)

(Table 2).

140

70

Table 2. Physical characteristics of subjects

Charactristics	SNU-81-AL grup		SNU-93 grup	
	NO	(%)	NO	(%)
Total	54	100	49	100
Age(years)				
20~24	14	25.9	5	10.2
25~29	22	40.7	22	44.9
30~34	8	14.8	12	24.5
30~	10	18.5	10	20.4
Mean ± S.D	29.0 ± 5.2		20.5 ± 6.2	
Height(cm)				
159 이하	7	13.0	1	2.0
160~164	4	7.4	6	12.2
165~169	12	22.2	5	10.2
170~174	21	38.9	22	44.9
175 이상	10	18.5	15	30.6
Mean ± S.D	169.6 ± 5.5		171 ± 5.8	
Weight(kg)				
49 이하	7	13.0	4	8.2
50~59	8	14.8	10	20.4
60~69	25	46.3	25	51.0
70~79	10	18.5	7	14.3
80 이상	4	7.4	3	6.1
Mean ± S.D	64.5 ± 9.9		63.7 ± 8.3	

## 2. 방법

### 1) 設問紙

SNU-81-AL SNU-93 設問紙 再現  
 設問紙  
 度 (test-retest)  
 1-2 設問 (self-administration)

### 2)

設問紙 再現  
 度  
 Cohen(1960) Kappa statistic  
 Kappa statistic 2  
 ×2 table

Result 2	Result 1		Total
	(+)	-	
(+)	a	b	t1
(-)	c	d	t2
Total	t3	t4	N

$$(P_o: \text{percent of agreement}) = (a+d)/N,$$

$$(P_c) = \{(t1*t3) + (t2*t4)\}/N$$

$$K(\text{kappa statistic}) = (p_o - p_c) / (1 - p_c)$$

Kappa statistic 0.4  
 (poor), 0.4-0.75  
 (excellent) (Fleiss,

1981).

## III. 결과

設問紙

Table 3 4

設問紙  
 (cough), (wheezing), 가  
 (phlegm) (breathlessness)  
 (cough) SNU-81-  
 AL SNU-93  
 SNU-81-AL (nasal catarrh)  
 (wheezing) SNU-93  
 (poor)  
 SNU-81-AL SNU-  
 81-AL 가  
 (past illness),  
 (excellent). SNU-81-AL  
 가 (cough)  
 6 SNU-93  
 (cough), 가 (phlegm),  
 (breathlessness), 가  
 (poor). SNU-93  
 가  
 SNU-93  
 SNU-81-AL

Table 3. Reliability of response to the SNU-81-AL questionnaire

Question topic & number	first positive	Second positive	Both positive	Both negative	% agreement	KAPPA
<기 침>						
RC1	11	8	6	38	86.275	0.54981
RC2	6	4	2	48	89.286	0.34375
RC3	8	8	8	43	88.462	0.44286
<담, 가래>						
RCP4	19	21	11	24	66.038	0.27837
RCP5	15	9	8	38	85.185	0.57895
RCP6	18	18	14	30	85.185	0.57895
<숨쉴때(씩씩소리)소리>						
SWH7	6	8	2	40	80.769	0.17722
<콧물, 코감기>						
SWH8	6	4	1	44	84.906	0.12033
SWH9	28	15	12	22	64.151	0.30021
SWH10	10	9	7	40	90.385	0.06782
<숨참, 숨헐떡임>						
RDF11	1	3	0	28	87.500	0.04918
RDF12	18	17	12	26	77.551	0.51133
<기후의 영향>						
RWT13	5	4	0	44	83.019	0.09153
<가슴병, 폐질환>						
RCD14	0	0	0	53	100.000	
<과거경력>						
RPM15	3	3	3	51	100.000	1.00000
RPM16	1	3	2	50	100.000	1.00000
RPM17	0	1	0	53	98.147	0.00000
RPM18	3	4	3	48	98.077	0.84706
RPM19	2	1	1	50	98.077	0.65789
<직업에 관하여>						
ROC3	35	32	21	16	59.677	0.19018
<담배피우는 것에 관하여> =흡연						
RSM4	38	38	37	15	96.296	0.91118
RSM42P	36	34	34	18	96.296	0.91892
RSM46	20	17	10	29	69.64	0.31609
RSM47	38	38	33	8	80.392	0.94388

Table 4. Reliability of response to the SNU-93 questionnaire

Question topic & number	first positive	Second positive	Both positive	Both negative	% agreement	KAPPA
<기 침>						
RC1	7	4	2	40	85.7143	0.28986
RC2	7	7	3	38	83.6735	0.33333
RC3	18	14	12	29	83.6735	0.63158
<가 래>						
RCP4	21	17	15	26	83.6735	0.65854
RCP5	3	3	1	45	83.6735	0.29078
<숨혈떡입>						
RBD6	3	3	1	44	91.8367	0.28986
RBD7	16	14	11	31	84.0000	0.61977
<숨수리>						
RWH8	11	6	5	38	86.0000	0.51253
<숨차거나 가슴답답함>						
RCT9	7	6	4	41	90.0000	0.55830
RCT10S	4	5	3	44	94.0000	0.63415
RCT11L	3	4	1	44	90.0000	0.23313
RCT11A	12	11	8	34	85.7143	0.60255
RCT13T	6	2	2	44	92.0000	0.46809
<과거앓은질병>						
RPMTB	4	5	4	34	97.4359	0.87460
RPMPPL	2	3	2	35	97.3684	0.78652
RPMBR	5	4	3	33	92.3077	0.62379
RPMPN	1	1	0	36	94.7368	0.02703
RPMAT	0	0	0	34	100.000	
RPMPPT	0	0	0	36	100.000	
RPMPFV	0	0	0	36	100.000	
RPMEC	13	7	7	36	87.735	0.63158
RPMRN	7	5	6	31	100.000	1.00000
<담배에 관하여>						
RSM15	30	34	29	21	89.286	0.78238
RSM16	19	20	14	24	77.551	0.53171
RSM17	29	29	24	15	79.592	0.57759

#### IV. 고찰

疫學的 研究 ) 設問( 2가 比較 設問紙 2가 , 比較性(Comparability) 가 設問 設問紙 設問 妥當性 設問紙 設問紙 疫學的 設問紙 質問項 , 가 現論的 設問紙 妥當性 (Validity), 再現性(Reliability) (Applicability) 가가 設問紙 設問紙가 疫學 調查 가 (test-retest) 가 (Ferris, 1973), 再現度 가 (Samet, 1978), 設問 ( , 1982). SNU-81-AL , SNU-93 가 SNU-93 SNU-81-AL 가 設問 設問 65% (Table 2) ( ) 90% (Van der Lende, et at., 1973: Samet, 1978: WHO, 1982). SUN-93 SNU-81-AL 設問 1 2 SNU-93 SNU-81-AL



AL SNU-81- SNU-93  
 SNU-93 90%  
 SNU-81-AL 96%,  
 95-99% (Fletcher, 1959: Morgan et,  
 al., 1964 : Holland et, at., 1966)  
 SNU-93

SNU-81-AL wheezing  
 (cough), (nasal catarrh)  
 가

81-AL SNU-93 SNU-  
 設問紙  
 疫學調査 SNU-  
 93 가

V. 결론

疫學的 研究

93) 再現度 設問紙(SNU-81-AL SNU-  
 比較 評價 103

1-2 設問紙 適用

SNU-93 設問  
 SNU-AL  
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