

Impact of Chinese culture on nursing students' critical thinking disposition – from the comparison of the research results of Macau, Hong Kong, Taiwan, Mainland, Japan, Australia and USA.

CHUNG, Siu Fung (鍾少鳳)

Kiang Wu Nursing college of Macau

Background of the study:

1. Critical Thinking is considered as a very important skill for nursing profession, and probably for many other professions.
2. Many nursing academia endeavored to enhance the critical thinking skill of the students.
3. We need to measure the critical thinking disposition of our students in order to plan or evaluate our interventions

Objectives of the study:

1. To identify the similarities in critical thinking disposition of nursing students in Chinese communities;
2. To study the similarities and differences in critical thinking disposition of nursing students in Chinese communities, Japan and Australia.

Measuring instrument:

- **California Critical Thinking Disposition Inventory (CCTDI)**
 - ◆ The CCTDI is based on expert consensus characterization of "ideal critical thinker" in **1990s**
 - ◆ 75 items
 - ◆ 7 subscales

非常不贊同 ←-----→ 非常贊同

[illegible]

Measuring instrument (cont'):

➤ CCCTDI – 75 items, 7 subscales

- truth-seeking (12 items)
- open-mindedness (12 items)
- analytical (11 items)
- systematic (11 items)
- inquisitiveness (10 items)
- self-confidence (9 items)
- maturity(10 items)

➤ Eventually, all subscales convert to a possible score of 10 to 60: $\leq 30 \rightarrow$ negative, 31-39 \rightarrow ambivalence, 40+ \rightarrow positive

➤ i.e. total score with a possible range of 70 to 420
 $\leq 210 \rightarrow$ negative, 211-279 \rightarrow ambivalence, 280+ \rightarrow positive

Measuring instrument(cont'):

➤ Chinese versions

- ◆ Translated by academia of nursing in Taiwan in 2002 – 75 items
- ◆ Translated by academia of nursing in other Chinese communities since then – 75 items
- ◆ Translated and modified to 70 items (7 items in each subscale) by academia of nursing of Hong Kong Polytechnic University and mainland universities in 2002

Targeted study population

- Bachelor degree level pre-registration nursing students of Chinese communities
- Bachelor degree level pre-registration nursing students of other countries who took part in cross-cultural studies with Chinese communities

Sample included in this study:

- One Macau study(镜湖) – panel studies since 2004
- One Hong Kong study (中文大学) – in 2002
- Three Mainland studies – the studies with the largest three samples
 - ◆ 浙江中医学院 - 681 students – in 2006
 - ◆ 昆明医科大学 – 531 students – in 2014
 - ◆ 莆田学院 – 296 students – in 2010
- One Taiwan (国立台北) and USA study – in 2003
- One HK (香港大学) & Australia study – in 2000
- One Mainland (西安交通) & Japan study – in 2005

Data collection methods:

- The data of Macau is obtained from a sample of about 500 nursing students studying in Kiang Wu nursing college of Macau - the study results has not yet published.
- The data of other communities are obtained from the published studies of other researchers which used CCTDI as the measuring instrument of critical thinking disposition.

Table 1. Mean scores of CCTDI

	澳门	香港	香港	台北	浙江	昆明	莆田	西安	Japan	Aust	USA
			(with Aus)	(with US)					(with Ja)		
Truthseeking	36.7	31.9	31.3	31	38.7	35.8	38.1	31.4	34.9	35	39.2
Openmindedness	41.2	38.1	38.4	40.9	43.9	41.6	37.7	37.5	41.8	41.9	43.9
Analyticity	41.1	40.6	41.3	43	45.3	43.1	31.4	42.3	36.6	41.7	43.1
Systematicity	36.4	36.6	37.1	38.3	40.2	38.4	33.3	38.8	35.1	38.5	41.1
Self-confidence of critical thinking	39.4	38.3	40.3	42.5	42.9	39.3	29.3	44.5	33.1	40.7	47.3
Inquisitiveness	42.2	42.1	46.3	48.4	47.8	41.9	31.0	46.3	46.6	46.3	42.9
Maturity of judgment	38.5	37.0	36.3	39.5	43.0	39.1	42.5	36.9	43.7	43.6	45.7
Total	275	265	268	284	302	284	244	278	272	288	303

Table 1a. Mean scores of CCTDI

	澳门	香港	香港 (with Aus)	台北 (with US)	浙江	昆明	莆田	西安 (with Ja)	Japan	Aust	USA
Truthseeking	36.7	31.9	31.3	31	38.7	35.8	38.1	31.4	34.9	35	39.2
Openmindedness	41.2	38.1	38.4	40.9	43.9	41.6	37.7	37.5	41.8	41.9	43.9
Analyticity	41.1	40.6	41.3	43	45.3	43.1	31.4	42.3	36.6	41.7	43.1
Systematicity	36.4	36.6	37.1	38.3	40.2	38.4	33.3	38.8	35.1	38.5	41.1
Self-confidence of critical thinking	39.4	38.3	40.3	42.5	42.9	39.3	29.3	44.5	33.1	40.7	47.3
Inquisitiveness	42.2	42.1	46.3	48.4	47.8	41.9	31.0	46.3	46.6	46.3	42.9
Maturity of judgment	38.5	37.0	36.3	39.5	43.0	39.1	42.5	36.9	43.7	43.6	45.7
Total	275	265	268	284	302	284	244	278	272	288	303

- Total score with a possible range of 70 to 420
 $\leq 210 \rightarrow$ negative, 211-279 \rightarrow ambivalence, 280+ \rightarrow positive

Table 2. Mean scores and (Rank) of CCTDI of Chinese communities

	澳门	香港	香港	台北	浙江	昆明	莆田	西安	Mean of 8 U	(Rank)
			(with Aus)	(with US)				(with Ja)		
Truthseeking 寻找真相	36.7 (2)	31.9 (1)	31.3 (1)	31.0 (1)	38.7 (1)	35.8 (1)	38.1 (6)	31.4 (1)	34.4	(1)
Systematicity 系统化能力	36.4 (1)	36.6 (2)	37.1 (3)	38.3 (2)	40.2 (2)	38.4 (2)	33.3 (4)	38.8 (4)	37.4	(2)
Maturity of judgment 认知成熟度	38.5 (3)	37.0 (3)	36.3 (2)	39.5 (3)	43.0 (4)	39.1 (3)	42.5 (7)	36.9 (2)	39.1	(3)
Self-confidence of critical thinking批判思维的自信心	39.4 (4)	38.3 (5)	40.3 (5)	42.5 (5)	42.9 (3)	39.3 (4)	29.3 (1)	44.5 (6)	39.6	(4)
Openmindedness 开放思想	41.2 (6)	38.1 (4)	38.4 (4)	40.9 (4)	43.9 (5)	41.6 (5)	37.7 (5)	37.5 (3)	39.9	(5)
Analyticity 分析能力	41.1 (5)	40.6 (6)	41.3 (6)	43.0 (6)	45.3 (6)	43.1 (7)	31.4 (3)	42.3 (5)	41.0	(6)
Inquisitiveness 求知欲	42.2 (7)	42.1 (7)	46.3 (7)	48.4 (7)	47.8 (7)	41.9 (6)	31.1 (2)	46.3 (7)	43.3	(7)
Total	275	265	268	284	302	284	244	278	275	

- All subscales with a possible range of 10 - 60
- $\leq 30 \rightarrow$ negative, 31-39 \rightarrow ambivalence, 40+ \rightarrow positive

Table 2a. Mean scores and (Rank) of CCTDI of Chinese communities

	澳门	香港	香港 (with Aus)	台北 (with US)	浙江	昆明	莆田	西安 (with Ja)	Mean (Rank) of 8 U
Truthseeking	36.7 (2)	31.9 (1)	31.3 (1)	31.0 (1)	38.7 (1)	35.8 (1)	38.1 (6)	31.4 (1)	34.4 (1)
Systematicity	36.4 (1)	36.6 (2)	37.1 (3)	38.3 (2)	40.2 (2)	38.4 (2)	33.3 (4)	38.8 (4)	37.4 (2)
Maturity of judgment	38.5 (3)	37.0 (3)	36.3 (2)	39.5 (3)	43.0 (4)	39.1 (3)	42.5 (7)	36.9 (2)	39.1 (3)
Self-confidence of critical thinking	39.4 (4)	38.3 (5)	40.3 (5)	42.5 (5)	42.9 (3)	39.3 (4)	29.3 (1)	44.5 (6)	39.6 (4)
Openmindedness	41.2 (6)	38.1 (4)	38.4 (4)	40.9 (4)	43.9 (5)	41.6 (5)	37.7 (5)	37.5 (3)	39.9 (5)
Analyticity	41.1 (5)	40.6 (6)	41.3 (6)	43.0 (6)	45.3 (6)	43.1 (7)	31.4 (3)	42.3 (5)	41.0 (6)
Inquisitiveness	42.2 (7)	42.1 (7)	46.3 (7)	48.4 (7)	47.8 (7)	41.9 (6)	31.1 (2)	46.3 (7)	43.3 (7)
Total	275	265	268	284	302	284	244	278	275

➤ All subscales with a possible score of 10 to 60:
≤ 30 → negative, 31-39 → ambivalence, 40+ → positive

Table 1. Mean scores and (Rank) of CCTDI of cross-cultural studies

	香港 (with Au)	台北 (with US)	西安 (with Ja)	Japan (with Main)	Australia (with HK)	USA (with Taiwan)	Mean of 8 U	(Rank)
Truthseeking	31.3 (1)	31.0 (1)	31.4 (1)	34.9 (2)	35.0 (1)	39.2 (1)	34.4	(1)
Systematicity	37.1 (3)	38.3 (2)	38.8 (4)	35.1 (3)	38.5 (2)	41.1 (2)	37.4	(2)
Maturity of judgment	36.3 (2)	39.5 (3)	36.9 (2)	43.7 (6)	43.6 (6)	45.7 (6)	39.1	(3)
Self-confidence of critical thinking	40.3 (5)	42.5 (5)	44.5 (6)	33.1 (1)	40.7 (3)	47.3 (7)	39.6	(4)
Openmindedness	38.4 (4)	40.9 (4)	37.5 (3)	41.8 (5)	41.9 (5)	43.9 (5)	39.9	(5)
Analyticity	41.3 (6)	43.0 (6)	42.3 (5)	36.6 (4)	41.7 (4)	43.1 (4)	41.0	(6)
Inquisitiveness	46.3 (7)	48.4 (7)	46.3 (7)	46.6 (7)	46.3 (7)	42.9 (3)	43.3	(7)
Total	268	284	278	272	288	303	275	

Discussion:

The most noteworthy difference between nursing students in Chinese communities and nursing students of other three culture are in the subscales of maturity of judgment.

- 3. 最好的论点, 往往来自于对某个问题的瞬间感觉。
- 7. 所谓真相, 不外乎个人的看法。
- 11. 付出高的代价 (例如: 金钱、时间、精力), 便一定能换取更好的意见。
- 22. 当我持开放的态度, 便不知什么是真、什么是假。
- 26. 如果可能的话, 我会尽量避免阅读。
- 37. 对我自己所相信的事, 我是坚信不疑的。
- 47. 「比喻」就像陆路行舟, 无用武之地。
- 55. 解决难题的最好方法是向别人问取答案。
- 61. 事物的本质和它的表象是一致的。
- 63. 有权势的人所作的决定便是正确的决定。

Discussion(Cont'):

A study of student prosthetists and orthotists in Hong Kong obtained similar results as the nursing students of Chinese communities

	Year 0	Year 1	Year 2	Year 3	8 Nursing
Truthseeking	32	31	30	34	34.4
Openmindedness	37	38	40	40	39.9
Analyticity	39	41	42	41	41.0
Systematicity	36	37	36	39	37.4
Self-confidence of CT	39	39	38	41	39.6
Inquisitiveness	40	41	44	45	43.3
Maturity of judgment	35	35	33	42	39.1
Total	259	263	262	282	275

Discussion (cont'):

- The relative low in critical thinking disposition scores and the problem in maturity of judgment may be a common issue among university students of Chinese community.
- During the planning and implementation of transformation from teaching-centered to learning-centered pedagogy for Chinese university students, awareness of and attention to these issues may be needed.

Welcome of questions and comments

