

# Medical Student's Perceptions of the Mentoring Program: A Survey from Religious Medical School in Taiwan

**Ting-Chun Tseng**

Tzu Chi University

**Tsung-Ying Chen**

Buddhist Tzu Chi General Hospital Hualien: Hualien Tzu Chi Hospital

**Shao-Yin Chu** (✉ [chushaoyin@gmail.com](mailto:chushaoyin@gmail.com))

Buddhist Tzu Chi General Hospital Hualien: Hualien Tzu Chi Hospital

**Hung-Che Wang**

National Dong Hwa University

**Ching-Yuan Chang**

Tzu Chi University

---

## Research article

**Keywords:** Mentoring program, Guidance, Counseling, Humanity

**Posted Date:** September 21st, 2020

**DOI:** <https://doi.org/10.21203/rs.3.rs-74922/v1>

**License:**  This work is licensed under a Creative Commons Attribution 4.0 International License. [Read Full License](#)

---

**Version of Record:** A version of this preprint was published on March 16th, 2021. See the published version at <https://doi.org/10.1186/s12909-021-02593-z>.

## Abstract

**Background:** Tzu Chi University (TCU) in Taiwan offers a mentoring program that differs from others since it comprises triple mentors: faculty mentors, Tzu Cheng/Yi De (TC/YDs who are senior volunteers), and school counselors. This study aimed to analyze medical student's perceptions of the triple mentors' role functions using a self-developed assessment tool.

**Methods:** The Role Functions of the Mentoring Program Scale (RFMPS) was developed through literature reviews, focus groups, and underwent exploratory factor analysis for internal consistency and reliability. The RFMPS consists of 16 items measuring the triple mentors' role functions on a five-point Likert scale. Items covered four role functions: mental counseling, educational guidance, career counseling, and humanistic/moral guidance. Student's perceptions were collected through an online survey and analyzed using a multivariate analysis of variance (MANOVA).

**Results:** The overall response rate was 64% (116/171). Faculty mentors provided students with preferable guidance counseling in all four role functions; TC/YDs particularly offered prominent humanistic/moral guidance and career counseling; school counselors were less preferred and guided students in need. Besides, students were evenly guided regarding their gender and year. The RFMPS was a reliable tool for evaluating the mentoring program as a whole.

**Conclusions:** Faculty mentors, TC/YDs, and school counselors comprehensively performed their role functions in the mentoring program. Humanistic/moral guidance is current and comparable to educational, career, and mental guidance counseling; the mentoring program can extend its scope by including humanistic, moral, or spiritual connotations.

## Background

An effective mentoring program is one of the most important elements in higher education, since it not only helps students understand themselves and their world but also facilitates their personal development [1, 2]. In this regard, Tzu Chi University (TCU) in Taiwan offers a unique mentoring program that differs from others, including triple mentors: the faculty mentors, Tzu Cheng/Yi De (TC/YDs), and school counselors.

More specifically, the faculty mentors are teachers from the Department of Medicine who provide guidance and advice, stimulate reflection, serve as role models, build networks, and answer questions [3–6]. The TC/YDs are senior volunteers appointed to accompany students; they enlighten positive characteristics, be as role models, and promote humanistic literacy to students [8–10]. The school counselors are licensed and appointed to offer guidance, counseling, and psychological advice for students in need [11, 12]. At TCU, three to four TC/YDs and one faculty mentor are assigned to every 10 to 13 students; every month (approximately four times a semester) TC/YDs and faculty mentors gather and interact with the students. However, the medical student's perception regarding such a specific mentoring program was not known.

To date, numerous study tools have been developed based on the aspects, such as career, psychosocial, personal/emotional function, pedagogical knowledge, professional development, interpersonal problems, and role modeling [13]. Few assessment tools have conceptualized humanity and morality as part of the mentoring programs; therefore, an assessment tool: Role Functions of the Mentoring Program Scale (RFMPS) was developed. The primary aim of this study was to analyze medical student's perceptions of the triple mentors' role functions using a self-developed assessment tool.

## Methods

### Setting and participants

A total of 116 medical students voluntarily and anonymously completed the online survey. The survey was distributed two months after the beginning of the fall 2019 semester via social networks. The participants' demographic characteristics are presented in Table 1. The undergraduate year of participants ranged from first-year to sixth-year, with 54.3% males and 45.7% females. The most frequently contacted mentors with the students in descending order were TC/YDs, faculty mentors, and school counselors; percentages of students who never interacted with the faculty mentors and TC/YDs were low (16.4%, 4.3%), except for the school counselors (59.5%).

Table 1  
Participants demographic characteristics

Variable	Total (N= 116)	
	N	Percentage
Gender		
Male	63	54.3
Female	53	45.7
Undergraduate year		
First-year	9	7.7
Second-year	27	23.3
Third-year	32	27.6
Fourth-year	34	29.3
Fifth to sixth-year	14	12.1
Frequency of interacting with faculty mentors this semester		
More than twice	47	40.5
Once or twice	50	43.1
None	19	16.4
Frequency of interacting with TC/YDs this semester		
More than twice	83	71.6
Once or twice	28	24.1
None	5	4.3
Frequency of interacting with school counselors this semester		
More than twice	11	9.5
Once or twice	36	31.0
None	69	59.5

## Study tool development

The draft RFMPS was developed through literature reviews, and a series of focus groups (experts of faculty mentors, TC/YDs, school counselors) using the Delphi method to reach a consensus. Initially, the draft consisted of 33 items categorized into five role functions, including life guidance, mental counseling, educational guidance, career counseling, and humanistic/moral guidance. It was then subjected to validation by six qualitative research experts for content and clarity of wording, following with the Kaiser-Meyer-Olkin test, Bartlett's test of sphericity, and exploratory factor analysis. Finally, the variable deduction extracted the five role functions into four role functions (excluding life guidance). Subsequently, the analysis suggested the RFMPS had well internal consistency and reliability with an acceptable total explanation of variance with a range from 76.29–85.62%, and an excellent Cronbach's alpha ranged from .95 to .97.

Content of the tool: the RFMPS is a 16-item tool measuring the triple mentors' role functions on a five-point Likert scale, ranging from one (strongly disagree) to five (strongly agree). Items of the RFMPS were categorized into four role functions: mental counseling, educational guidance, career counseling, and humanistic/moral guidance. An additional documentation file shows this in more detail [see Additional file 1].

## Data analysis

All data were analyzed using SPSS Statistics for Windows, Version 18.0. Descriptive statistics of the triple mentors' role functions were performed. Multivariate analysis of variance (MANOVA) was conducted to analyze each role function between the triple mentors, and the four role functions among the triple mentors.

## Results

Overall, the response rate was 64% (116/171). The descriptive statistics (Table 2) revealed faculty mentor had the highest mean scores of the four role functions: mental counseling ( $M = 3.65$ ,  $SD = .80$ ), educational guidance ( $M = 4.04$ ,  $SD = .71$ ), career counseling ( $M = 3.87$ ,  $SD = .79$ ), and humanistic/moral guidance ( $M = 3.82$ ,  $SD = .70$ ).

Table 2  
Descriptive statistics of the RFMPS with possible score of 1–5 ( $N = 116$ )

Role functions	Faculty mentors		TC/YDs		School counselors	
	M	SD	M	SD	M	SD
Mental counseling	3.65	.80	3.26	.99	2.86	1.18
Educational guidance	4.04	.71	2.93	.98	2.51	1.06
Career counseling	3.87	.79	3.44	.97	2.63	1.12
Humanistic/moral guidance	3.82	.70	3.79	.95	2.86	1.14
Abbreviations: M mean, SD standard deviation						

## Posteriori test for each role function between the triple mentors

MANOVA analysis (Table 3) showed statistically significant multivariate differences ( $Wilk's \Lambda = 37.23$ ,  $p < .001$ ). The univariate  $F$  test and the posteriori test suggested there were significant differences between the triple mentors: both faculty mentors and TC/YDs had higher scores than the school counselors for humanistic/moral guidance ( $F_{(2,345)} = 38.88$ ,  $p < .0125$ ); faculty mentors had higher scores than TC/YDs, and TC/YDs had higher scores than school counselors for mental counseling ( $F_{(2,345)} = 18.17$ ,  $p < .0125$ ), educational guidance ( $F_{(2,345)} = 83.72$ ,  $p < .0125$ ), and career counseling ( $F_{(2,345)} = 48.92$ ,  $p < .0125$ ).

Table 3  
MANOVA summary table for each role function between the triple mentors

Variables	df	SSCP	Multivariate				Univariate $F$ -ratio			
			Wilk's $\Lambda$	Mental counseling	Educational guidance	Career counseling	Humanistic/moral guidance			
Between subjects	2	36.18	69.32	57.06	44.60	37.23***	18.17*	83.72*	48.92*	38.88*
		69.32	143.59	104.46	72.90					
		57.06	104.46	92.16	75.98					
		44.60	72.90	75.98	69.59					
Within subjects	345	343.54	243.28	285.38	252.24					
		243.28	295.85	250.30	219.28					
		258.38	250.30	327.99	242.02					
		252.24	219.28	242.02	308.75					
Posteriori Test						$FM > TC/YD > SC$	$FM > TC/YD > SC$	$FM > TC/YD > SC$	$FM, TC/YD > SC$	

Abbreviations: FM faculty mentor, TC/YD Tzu Cheng/Yi De, SC School counselor, df degree of freedom

\* p value < .0125

\*\*\* p value < .001

## Posteriori test for the four role functions among each mentor

MANOVA analysis (Table 4) showed statistically significant multivariate differences (*Wilk's*  $\Lambda = 11.24, p < .001$ ). The univariate *F* test and the posteriori test suggested: there were statistically significant differences among faculty mentors: educational guidance had higher scores than mental counseling ( $F_{(3,460)} = 5.29, p < .0167$ ); among TC/YDs: career counseling had higher scores than educational guidance, and humanistic/moral guidance had higher scores than both mental counseling and educational guidance ( $F_{(3,460)} = 15.92, p < .0167$ ). However, there were no significant differences among school counselors ( $F_{(3,460)} = 2.72, p > .0167$ ).

Table 4  
MANOVA summary table for the four role functions among each mentor

Variables	df	SSCP			Multivariate	Univariate <i>F</i> -ratio		
					Wilk's $\Lambda$	Faculty mentors	TC/YDs	School counselors
Between subjects	3	8.94	-8.29	-8.33	11.24***	5.29*	15.92*	2.72
		-8.29	45.06	14.94				
		-8.33	14.94	10.29				
Within subjects	460	259.16	165.09	95.79				
		165.09	434.16	169.49				
		95.79	169.49	579.80				
Posteriori Test					<i>EG &gt; MC</i>	<i>CC &gt; EG; HG &gt; MC, EG</i>		
Abbreviations: MC <b>mental counseling</b> , EG <b>educational guidance</b> , CC <b>career counseling</b> , HG <b>humanistic/moral guidance</b> , df <b>degree of freedom</b>								
* p value < .0167								
*** p value < .001								

## Discussion

This was the foremost, quantitative study to examine a mentoring program at a religious medical school, analyzing medical students' perceptions regarding the role functions of faculty mentors, TC/YDs, and school counselors. Table 3 and Table 4 together indicated the triple mentors were distinguished in role functions. Overall, faculty mentors offered medical students with the most preferred guidance counseling in all four role functions, especially educational guidance; TC/YDs provided prominent and preferable humanistic/moral guidance and career counseling. Conversely, school counselors were less preferred, which could have reflected in they were for students in need. Moreover, analysis revealed students were evenly guided regarding their gender and undergraduate year. The most featured outcome of this study was that TC/YDs provided the students with prominent humanistic/moral guidance and career counseling, which is novel and important.

Table 3 indicated how medical students perceived supportive guidance from the faculty mentors. This finding echoed previous studies indicating the frequency and nature of such guidance were positively correlated with students' perceptions of the mentors' supportiveness and program satisfaction [7, 14]. This was also in line with related studies on how faculty mentors' guidance through various approaches can have positive impacts on students [3–6]. Medical students gave lower scores to school counselors should be interpreted cautiously (Table 3). In this regard, such lower scores could have been based on their limited contact with the school counselors (Table 1), and not on the fact that they were less important. As for the TC/YDs, most students were willing to interact with them at least three times a semester on specific dates for humanistic/moral guidance and career counseling (Table 1). This was probably since the TC/YDs were senior volunteers with kindness and enthusiasm to education, and had professional careers (e.g., doctors, lawyers, entrepreneurs, teachers, and professionals). They were willing to keep a close connection with the students, share their life stories, experiences, and philosophy of life, which echoes TCU's mission statement: To prepare those who embrace "humanistic literacy" and are willing to tend to those in need [8–10]. As stated above, the characteristics of the TC/YDs gained themselves a position in the mentoring program and provided comprehensive guidance along with the faculty mentors and school counselors.

Despite there were numerous tools evaluating the mentoring program, few tools have conceptualized humanity and morality as part of such programs. According to the findings, the mean scores of the humanistic/moral guidance (Table 3 and Table 4) were comparable to other guidance, implicating medical students perceived such guidance as a crucial part of the mentoring program. In other words, humanity and morality could not be more important than other aspects in life; students in the 21st century should not only care about their education, career, and mental health, but their relationship with the society, the environment, and the world.

There are several limitations worth noting. This study focused on the aspect of guidance counseling role functions, which might not be generalizable to other fields such as accountability and effectiveness. All of the outcomes were based on a single perspective of the medical students at TCU, which could result in a lack of representation from other departments or colleges. The fact that the TC/YDs were volunteer, unpaid social elites made it more difficult to be ubiquitous in other schools. Even so, the RFMPS can still be selectively utilized for faculty mentors and school counselors, especially regarding the humanistic/moral guidance. Thus, future research can explore the utilization of the RFMPS on a wider scale, investigate whether the mentoring program at TCU is preferable over other mentoring programs, analyze different participants' perceptions, and conceptualize the humanistic, moral, or spiritual aspects of the mentoring program. In-depth interviews or focus groups could also provide a better understanding of the TC/YDs and offer additional insights into humanistic/moral guidance.

## Conclusions

The faculty mentors provided medical students with preferable guidance counseling in all four role functions, while the TC/YDs provided the students with prominent humanistic/moral guidance and career counseling. Conversely, the school counselors were less preferred. The humanistic/moral guidance is a current conception for mentoring programs; findings implicated that humanistic/moral guidance is as comparable as educational, career, mental guidance counseling. Namely, the mentoring program can extend its scope by including humanistic, moral, or spiritual connotations.

## Abbreviations

TCU: Tzu Chi University; TC/YD: Tzu Cheng/Yi De; RFMPS: Role Functions of the Mentoring Program Scale; MANOVA: Multivariate analysis of variance

## Declarations

### Ethics approval and consent to participate

The study is approved by the Research Ethics Committee of the Hualien Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation (Identification number: IRB107-209-B). Consent to participate is not applicable and is approved by the ethics committee.

### Consent for publication

Not applicable.

### Availability of data and materials

The survey tool used for the study is provided as supplementary information. All data are stored according to the ethical standards and are available upon reasonable request to the authors.

### Competing interests

The authors declare that they have no competing interests.

### Funding

Funding for the study is provided by Buddhist Tzu Chi Medical Foundation Advancement (Number: TCMF-P 108-04). The funding body play no role in the design of the study and collection, analysis and interpretation of data, and in writing the manuscript.

### Authors' contributions

All authors had full access to all the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis. TCT, TYC and SYC participated in focus groups, survey design, interpretation of data, and critical revision of manuscript. TCT administered the survey and wrote the original draft. HCW and CYC planned and undertook the data analysis. All authors contributed to further drafts and have read and approved the final version of the manuscript.

## Acknowledgements

The authors thank Meei-Ju Lin and Jon-Son Kuo specifically for their excellent work in methodology and validation. The author gratefully acknowledges the Tzu Chi faculty mentors, TC/YDs, school counselors, and students for taking part in the research; enago ([www.enago.tw](http://www.enago.tw)) for professional English editing services.

## References

1. Jan H, Mattoo MI. Historical Background of Guidance. In: Educational Guidance and Counselling: For Students of Education. Educreation Publishing; 2018. p. 1-29.
2. Margolis E (Ed.). The hidden curriculum in higher education. New York: Routledge; 2001
3. Stenfors-Hayes T, Hult H, Dahlgren LO. What does it mean to be a mentor in medical education? *Medical teacher*. 2011; doi:10.3109/0142159X.2011.586746.
4. Stenfors-Hayes T, Kalén S, Hult H, Dahlgren LO, Hindbeck H, Ponzer S. Being a mentor for undergraduate medical students enhances personal and professional development. *Medical teacher*. 2010; doi:10.3109/01421590903196995.
5. Frei E, Stamm M, Buddeberg-Fischer B. Mentoring programs for medical students - A review of the PubMed literature 2000-2008. *BMC medical education*. 2010; doi:10.1186/1472-6920-10-32.
6. Burgess A, van Diggele C, Mellis C. Mentorship in the health professions: a review. *The Clinical Teacher*. 2018; doi:10.1111/tct.12756.
7. Park J, Adamiak P, Jenkins D, Myhre D. The medical students' perspective of faculty and informal mentors: a questionnaire study. *BMC medical education*. 2016; doi:10.1186/s12909-016-0526-3.
8. Chang FM. Study of Satisfaction Levels with the Functions of the Tzu Cheng/Yi Te Association. *Tzu Chi Nursing Journal*. 2009; doi:10.6974/tcnj.200910.0063.
9. Chang YC, Huang SC. The Philosophy and Practices of Tzu Chi's Humanitarian Education. *Journal of Holistic Education*. 2009; doi:10.6272/jhe.2009.05.8.
10. Office of Humanities, Tzu Chi University. Activities of The Tzu Cheng/Yi Te. [http://humanities.tcu.edu.tw/?page\\_id=186](http://humanities.tcu.edu.tw/?page_id=186) (2020). Accessed 4 Sep 2020.
11. Norman CG, Patricia H. Developing and Managing Your School Guidance & Counseling Program. 5th ed. American Counseling Association; 2006.
12. Jered BK, Rhonda LW, Leann MM, Laura MC, Tammy LH. Introduction to Professional School Counseling: Advocacy, Leadership, and Intervention. Routledge; 2016
13. Chen Y, Watson R, Hilton A. A review of mentorship measurement tools. *Nurse Educ Today*. 2016; doi:10.1016/j.nedt.2016.01.020.
14. Santos SJ, Reigadas ET. Latinos in Higher Education: An Evaluation of a University Faculty Mentoring Program. *Journal of Hispanic Higher Education*. 2002; doi:10.1177/1538192702001001004

## Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- [Additionalfile1.docx](#)