ORIGINAL ARTICLE

Attitudes of Speech and Language Pathology Students toward Their Field of Study and Future Career: A Socio-Cultural Perspective

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Background: This study explores the attitudes of speech and language pathology students toward their field of study and future career prospects at Mashhad University of Medical Sciences. These insights are crucial for designing effective educational programs at Mashhad University of Medical Sciences, particularly by highlighting how socio-cultural and demographic factors shape their perspectives.
Method: A total of 88 students (79 bachelors and 9 MSc students) of Mashhad University of Medical Sciences participated in this descriptive–correlational, cross-sectional study during the second semester of the 2022–2023 academic year. Data were collected using a 17-item researcher-made questionnaire, measuring three components: interest in the field, future career prospects, and career planning. Data were analyzed using SPSS V.22 through descriptive statistics, t-test, ANOVA, Pearson correlation, and multiple regression analysis.
Results: Mean total attitude score was 61.19 ± 11.23, indicating a generally positive outlook toward the field and future career. Significant differences were observed based on gender, marital status, and employment ($p < 0.05$), but not for age ($p = 0.18$), being native ($p = 0.77$), grade ($p = 0.34$), and academic semester ($p = 0.07$). Students who were married or employed tended to show more optimistic attitudes—possibly reflecting the impact of cultural expectancies in Iran, where social stability and work experience are highly valued.
Conclusion: Overall, students exhibited positive attitudes toward their studies and future careers. However, these attitudes are shaped not only by individual motivation but also by socio-cultural influences, such as family expectations and perceptions of professional prestige. Recognizing these contextual factors can help universities develop targeted educational and career support programs that strengthen students' professional identity and readiness for practice.

Keywords: Attitude, Speech and language pathology, Education, Socio-cultural factors, Professional, Students

اتجاهات طلاب تخصص أمراض النطق واللغة نحو مجال دراستهم ومسارهم المهني المستقبلي: منظور اجتماعي-ثقافي

الخلفية: تبحث هذه الدراسة في اتجاهات طلاب تخصص أمراض النطق واللغة في جامعة مشهد للعلوم الطبية تجاه مجال دراستهم وآفاقهم المهنية المستقبلية. وتُعد هذه الرؤى بالغة الأهمية لتصميم برامج تعليمية فعالة في الجامعة، لا سيما من خلال تسليط الضوء على كيفية تشكيل العوامل الاجتماعية والثقافية والديموغرافية لوجهات نظرهم.
الطريقة: شارك ما مجموعه ٨٨ طالباً (٧٩ في مرحلة البكالوريوس و٩ في مرحلة الماجستير) من جامعة مشهد للعلوم الطبية في هذه الدراسة الوصفية الارتباطية والمقطعية خلال الفصل الدراسي الثاني من العام الدراسي ٢٠٢٢-٢٠٢٣. جُمعت البيانات باستخدام استبيان أعده الباحثون ومكون من ١٧ بنداً، لقياس ثلاثة محاور: الاهتمام بالمجال، وآفاق المستقبل المهني، والتخطيط المهني. وتم تحليل البيانات باستخدام برنامج (SPSS V.22) عبر الإحصاءات الوصفية، واختبار "ت" (t-test)، وتحليل التباين (ANOVA)، ومعامل ارتباط بيرسون، وتحليل الانحدار المتعدد.
النتائج: بلغ متوسط الدرجة الكلية للاتجاهات ٦١,١٩ ± ١١,٢٣، مما يشير إلى نظرة إيجابية عامة تجاه المجال والمسار المهني المستقبلي. ولوحظت فروق ذات دلالة إحصائية بناءً على الجنس والحالة الاجتماعية والوضع الوظيفي ($p < 0.05$)، بينما لم تظهر فروق دالة إحصائياً بالنسبة للعمر ($p = 0.18$)، أو كون الطالب من سكان المنطقة الأصليين ($p = 0.77$)، أو المستوى الدراسي ($p = 0.34$)، أو الفصل الدراسي ($p = 0.07$). وقد أظهر الطلاب المتزوجون أو العاملون اتجاهات أكثر تفاؤلاً، وهو ما قد يعكس تأثير التوقعات الثقافية في إيران، حيث تحظى الاستقرار الاجتماعي والخبرة العملية بتقدير كبير.
الخلاصة: بشكل عام، أبدى الطلاب اتجاهات إيجابية تجاه دراستهم ومستقبلهم المهني. ومع ذلك، فإن هذه الاتجاهات لا تتشكل فقط بفعل الدافع الفردي، بل تتأثر أيضاً بالعوامل الاجتماعية والثقافية، مثل توقعات الأسرة والتصورات المتعلقة بالمكانة المهنية. ويمكن أن يساعد إدراك هذه العوامل السياقية الجامعات في تطوير برامج تعليمية ومهنية موجهة تعزز الهوية المهنية للطلاب وجاهزيتهم لممارسة المهنة.

الكلمات المفتاحية: الاتجاهات، أمراض النطق واللغة، التعليم، العوامل الاجتماعية-الثقافية، مهني، طلاب

اسپیچ اینڈ لینگویج پیتھالوجی (speech and language pathology) کے طلبہ کا اپنے شعبہ تعلیم اور مستقبل کے کیریئر کے بارے میں رویہ: ایک سماجی و ثقافتی تناظر

پس منظر: یہ مطالعہ مشہد یونیورسٹی آف میڈیکل سائنسز میں اسپیچ اینڈ لینگویج پیتھالوجی کے طلبہ کے اپنے شعبہ تعلیم اور مستقبل کے کیریئر کے امکانات کے بارے میں رویوں کا جائزہ لیتا ہے۔ یہ معلومات مشہد یونیورسٹی آف میڈیکل سائنسز میں مؤثر تعلیمی پروگراموں کی تشکیل کے لیے انتہائی اہم ہیں، خاص طور پر اس بات کو اجاگر کرنے کے لیے کہ سماجی و ثقافتی اور آبادیاتی عوامل کس طرح اُن کے نقطہ نظر کو تشکیل دیتے ہیں۔
طریقہ: تعلیمی سال ۲۰۲۳-۲۰۲۲ کے دوسرے سمسٹر کے دوران مشہد یونیورسٹی آف میڈیکل سائنسز کے کل ۸۸ طلبہ (۷۹ بیچلر اور ۹ ایم ایس سی کے طلبہ) نے اس وضاحتی-باہمی تعلق (descriptive-correlational) اور کراس سیکشنل مطالعے میں حصہ لیا۔ ڈیٹا کی جمع آوری محقق کے تیار کردہ ۱۷ نکات پر مشتمل سوالنامے کے ذریعے کی گئی، جس میں تین پہلوؤں کی پیمائش کی گئی: شعبے میں دلچسپی، مستقبل کے کیریئر کے امکانات، اور کیریئر کی منصوبہ بندی۔ ڈیٹا کا تجزیہ SPSS V.22 کے ذریعے وضاحتی شماریات (descriptive statistics)، ٹی-ٹیسٹ (t-test)، انووا (ANOVA)، پیئرسن کوریلیشن (Pearson correlation)، اور ملٹیپل ریگریشن اینالائسز (multiple regression analysis) کے ذریعے کیا گیا۔
نتائج: رویے کا اوسط کل اسکور ۶۱,۱۹ ± ۱۱,۲۳ تھا، جو شعبے اور مستقبل کے کیریئر کے بارے میں مجموعی طور پر مثبت نقطہ نظر کی نشاندہی کرتا ہے۔ جنس، ازدواجی حیثیت اور ملازمت کی بنیاد پر نمایاں فرق ($p < 0.05$) دیکھا گیا، لیکن عمر ($p = 0.18$)، مقامی رہائشی ہونے ($p = 0.77$)، گریڈ ($p = 0.34$) اور تعلیمی سمسٹر ($p = 0.07$) کے لحاظ سے کوئی نمایاں فرق نہیں پایا گیا۔ شادی شدہ یا ملازمت پیشہ طلبہ نے زیادہ پرامید رویوں کا اظہار کیا—جو ممکنہ طور پر ایران میں ثقافتی توقعات کے اثر کی عکاسی کرتا ہے، جہاں سماجی استحکام اور کام کے تجربے کو بہت اہمیت دی جاتی ہے۔
نتیجہ: مجموعی طور پر، طلبہ نے اپنی تعلیم اور مستقبل کے کیریئر کے بارے میں مثبت رویوں کا مظاہرہ کیا۔ تاہم، ان رویوں کی تشکیل نہ صرف انفرادی ترغیب سے ہوتی ہے بلکہ سماجی و ثقافتی اثرات، جیسے کہ خاندانی توقعات اور پیشہ ورانہ وقار کے تصورات سے بھی ہوتی ہے۔ ان سیاق و سباق سے متعلق عوامل کو سمجھنا یونیورسٹیوں کی مدد کر سکتا ہے کہ وہ ایسے ہدف پر مبنی تعلیمی اور کیریئر سپورٹ پروگرام تشکیل دیں جو طلبہ کی پیشہ ورانہ شناخت اور عملی کام کے لیے تیاری کو مضبوط بنائیں۔

کلیدی الفاظ: رویہ، اسپیچ اینڈ لینگویج پیتھالوجی، تعلیم، سماجی و ثقافتی عوامل، پیشہ ورانہ، طلبہ

نگرش دانشجویان آسیب شناسی گفتار و زبان نسبت به رشته تحصیلی و آینده شغلی: یک رویکرد اجتماعی- فرهنگی

زمینه و هدف: این مطالعه به بررسی نگرش دانشجویان آسیب شناسی گفتار و زبان نسبت به رشته تحصیلی و چشم‌اندازهای شغلی آینده آن‌ها در سال تحصیلی ۱۴۰۱-۱۴۰۲ در دانشگاه علوم پزشکی مشهد می‌پردازد. تأکید این تحقیق بر نقش عوامل اجتماعی-فرهنگی و جمعیت‌شناختی در شکل‌گیری دیدگاه‌های دانشجویان است.
روش: در این مطالعه توصیفی - همبستگی از نوع مقطعی که در سال تحصیلی ۱۴۰۱-۱۴۰۲ در دانشگاه علوم پزشکی مشهد انجام شد، ۸۸ دانشجو (۷۹ دانشجوی کارشناسی و ۹ دانشجوی تحصیلات تکمیلی) شرکت کردند. داده‌ها با پرسشنامه محقق ساخته ۱۷ آیتمی تارویردیزاده و همکاران (۲۰۱۸) جمع‌آوری شد که سه مؤلفه «علاقه به رشته»، «چشم‌انداز شغلی آینده» و «برنامه‌ریزی شغلی» را اندازه‌گیری می‌کند. داده‌ها با استفاده از نرم‌افزار SPSS نسخه ۲۲ و آمار توصیفی، آزمون t، آزمون ANOVA، همبستگی پیرسون و تحلیل رگرسیون چندگانه تحلیل شدند.
یافته‌ها: میانگین امتیاز کل نگرش ۶۱.۱۹ ± ۱۱.۲۳ بود که نشان‌دهنده نگرش کلی مثبت دانشجویان نسبت به رشته و آینده شغلی است. تفاوت‌های معناداری بر اساس جنسیت، وضعیت تأهل و اشتغال مشاهده شد ($p<$ ۰/۰۵)؛ اما برای سن ($p=$ ۰/۱۸)، بومی بودن ($p=$ ۰/۷۷)، معدل ($p=$ ۰/۳۴) یا نیمسال تحصیلی ($p=$ ۰/۰۷) تفاوت معناداری وجود نداشت. دانشجویان متأهل یا شاغل نگرش خوش‌بینانه‌تری داشتند؛ احتمالاً به دلیل نقش هنجارهای فرهنگی در ایران که در آن ثبات اجتماعی و تجربه کاری ارزش بالایی دارد.
نتیجه گیری: دانشجویان نگرش مثبتی نسبت به رشته و آینده شغلی خود نشان دادند. که این نگرش تحت تأثیر عوامل اجتماعی-فرهنگی مانند انتظارات خانواده و برداشت‌های جامعه از جایگاه حرفه‌ای قرار دارند. شناسایی این عوامل زمینه‌ای می‌تواند به دانشگاه‌ها کمک کند تا برنامه‌های آموزشی و حمایتی هدفمندتری برای تقویت هویت حرفه‌ای و آمادگی عملی دانشجویان طراحی کنند.

واژه های کلیدی: نگرش، گفتاردرمانی، آموزش، عوامل اجتماعی- فرهنگی، حرفه‌ای، دانشجویان

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INTRODUCTION

Education at all levels aims to develop students' behaviors, thoughts, attitudes, and skills, which ultimately manifest in their academic performance and progress (1). Numerous studies have addressed the importance of learners' academic achievement and the prevention of academic decline, investigating both internal and external influencing factors. One particularly influential element in students' success is their attitude toward their field of study and future career. Understanding these attitudes enables educators and policymakers to predict and interpret students' motivations and behaviors.(2). According to motivational theories, behavior is shaped by the interaction of goals, personal beliefs, and emotions. Consequently, students' beliefs and expectations about their academic field and career aspirations stem from their desired future outcomes (1).

In many contexts, including Iran, students' career attitudes are not solely determined by personal motivation or academic environment; they are deeply intertwined with socio-cultural expectations, such as family influence, social prestige associated with healthcare professions, and perceived job security. These factors can significantly shape how students perceive their professional future, especially in rehabilitation sciences where career pathways may be less well-defined compared to clinical medicine or dentistry (3).

The growing number of graduates in medical and allied health fields has led to heightened concern regarding job opportunities and professional stability. This has, in turn, affected students' confidence about their future careers (4). It is commonly believed that an oversupply of graduates may reduce income potential and diminish enthusiasm for the profession (5). When individuals lose interest in their work, long-term motivation and job satisfaction inevitably decline, thereby reducing professional effectiveness (6).

Employment serves as a central pillar of human life, fulfilling both economic and psychological needs (1). Universities thus play a critical role in preparing students not only academically but also emotionally and socially for future employment (7). In Iran, where family expectations and societal perceptions of "prestigious" careers often guide students' choices, understanding these cultural dimensions becomes vital. Students in health-related disciplines, including speech and language pathology, may experience conflicting pressures: the intrinsic desire to help others versus the extrinsic social expectations of stable and high-status employment (8-10). Attitudes, as a combination of cognitive, emotional, and behavioral readiness, are shaped by ongoing environmental interactions throughout life. The university period often represents a turning point for such changes. Therefore, examining students' attitudes toward their studies and careers is essential for designing responsive educational policies (4).

The study of attitudes is prominent in social psychology, offering invaluable insights into human behavior and its interpretation. Since universities are epicenters of societal evolution across various domains, and students represent the bedrock of these institutions, they inevitably become the primary workforce for diverse organizations and institutions in the future. Consequently, understanding students' attitudes towards their future careers, particularly in rehabilitative majors, assumes paramount importance (11). In rehabilitation sciences such as speech therapy, these attitudes gain even greater importance. Unlike medicine or nursing, speech and language pathology is still a relatively young and evolving field in many countries, including Iran. Cultural awareness, community understanding, and recognition of its professional role may influence students' motivation and identity development. Investigating these socio-cultural and demographic factors can thus illuminate how contextual realities shape students' professional outlook.

To date, limited research has focused on attitudes towards future careers in rehabilitation fields within Iranian universities. However, extensive studies have been conducted globally, including in Iran, to assess medical students' attitudes (12). For instance, a study in the UK in 1993 revealed a need for more confidence among most general practitioners regarding their future careers (13). Conversely, research conducted at the University of Pennsylvania in the United States found that 90% of medical students expressed satisfaction with their educational programs and optimism about their future careers (14). Similarly, a study involving 200 physiotherapy students at Babol University of Medical Sciences indicated that most students (17% very much, 44% much) were content with their field of study and held positive attitudes towards their future careers. Factors such as age, gender, marital status, and educational level did not demonstrate a statistically significant relationship with students' career attitudes (15). Additionally, an analysis of 578 graduates from the School of Health at Isfahan University of Medical Sciences between 1989 and 1994 revealed that 54.8% were employed in government agencies, which may alleviate concerns among current students regarding their future careers (5). Similarly, findings from a study involving nursing, midwifery, and public health students at Hamedan University of Medical Sciences suggested that nearly 50% of students harbored concerns about their future career prospects (16).

Given the very limited studies conducted in Iranian

universities on the attitudes of rehabilitation students towards their field of study and future careers, especially in speech and language pathology, recognizing students' issues and problems regarding their future careers is one of the duties of the educational system. Therefore, we decided to evaluate the attitudes of speech therapy students towards their field of study and future careers at Mashhad University of Medical Sciences, focusing on individual and socio-cultural factors affecting their views on their field of study and future career prospects.

METHODS

Participants

This study adopted a descriptive–correlational and cross-sectional design, aiming to explore the attitudes of speech and language pathology students toward their field of study and future career prospects. A total of 88 students—including 79 undergraduates and 9 postgraduates—participated during the second semester of the 2022–2023 academic year at Mashhad University of Medical Sciences (MUMS). The participants were selected using a census approach, meaning that all eligible students currently enrolled in the Speech Therapy program were invited to participate. There were no exclusion criteria; thus, the study sought to represent the complete population of students within the department. Participation was voluntary, and students could withdraw at any time without penalty. Prior to data collection, ethical approval was obtained from the university's ethics committee, and all participants provided informed consent. This ensured compliance with research ethics standards and respect for students' autonomy.

Procedures

After coordination with faculty officials and obtaining permission, students were informed about the purpose and procedures of the study. They then completed a questionnaire assessing attitudes toward their field of study and future career.

This instrument, originally developed by Tarvirdizadeh et al. (2018), contains 17 items categorized into three subscales: Interest in the academic field (7 items), Future career prospects (5 items), and Career planning (5 items). Responses were rated on a five-point Likert scale ranging from Strongly Agree (5) to Strongly Disagree (1). Higher scores indicated more positive attitudes. The total possible score ranged from 17 to 85. Based on Tarvirdizadeh's criteria: Scores below 28 indicated a low positive attitude, Scores 28–56 indicated a moderately positive attitude, and Scores above 56 reflected a highly positive attitude toward the field and future career (1).

This measurement approach is particularly suitable for the Iranian context, as it captures both personal and socially influenced components of career attitudes—such as perceptions of prestige, family expectations, and job security.

Data analysis

Data were analyzed using SPSS version 22. Descriptive statistics, including mean, standard deviation, median, minimum, and maximum were used to summarize demographic and attitudinal variables. Normality was tested using the Kolmogorov–Smirnov test. Parametric statistic tests could be used when the data have normal distribution. Therefore, independent t-tests and ANOVA were applied for comparisons between demographic groups, while Pearson correlation coefficients examined the relationships between continuous variables (age, GPA, and total attitude score). To further control for potential confounding variables and to assess the predictive strength of demographic characteristics (gender, marital status, employment status, semester, academic level, and native status), multiple regression analysis was performed.

RESULTS

The total mean attitude score among the students was 61.19 ± 11.23, generally indicating highly positive attitudes toward their field of study and future career prospects. The demographic characteristics of the study participants and the results related to the comparison of variables are summarized in Table 1. Most participants were female, single, and unemployed, and the sample included students from the second, fourth, sixth, and eighth semesters. The majority were enrolled in the undergraduate (bachelor's) program.

Regarding gender, male students demonstrated significantly higher mean attitude scores (68.16 ± 7.42) than female students (60.06 ± 11.37). As for the marital and employment status, significant differences were found in students' attitudes based on marital and employment status. Married students exhibited higher attitude scores (66.64 ± 8.23) than single students (60.13 ± 11.47). Likewise, employed students scored higher (65.50 ± 6.55) compared to unemployed students (59.85 ± 11.24) ($p < 0.05$) (Table 1).

In case of semester and academic level, a one-way ANOVA was conducted to compare total attitude scores across semesters (second, fourth, sixth, and eighth). The analysis revealed no significant differences between semesters ($p = 0.075$), indicating that attitudes remained relatively stable across academic progression. This stability may suggest that the educational environment and curriculum maintain a consistent level of student engagement and satisfaction throughout the program. MSc students had slightly higher scores (67.00 ± 5.89) than bachelors (60.51 ± 11.53), though the difference was not statistically significant ($p = 0.10$).

Table 1. Mean scores of attitudes of speech and language pathology students toward their field of study and career future according to their demographic characteristics

Variable	Category	N (%)	Mean (SD)	df	p-value
Gender	Male	12 (13.6)	68.16 (7.42)	85	0.02
	Female	76 (86.4)	60.06 (11.37)		
Marital Status	Single	74 (84.1)	60.13 (11.47)	84	0.05
	Married	14 (15.9)	66.64 (8.23)		
Employment Status	Employed	12 (13.6)	65.50 (6.55)	84	0.01
	Unemployed	75 (85.2)	59.85 (11.24)		
Semester	2	21 (23.9)	58.19 (15.08)	85	0.21
	4	24 (27.3)	63.03 (7.36)		
	6	21 (23.9)	59.04 (10.06)		
	8	22 (25.0)	64.28 (10.91)		
Grade	Bachelor's	79 (89.8)	60.51 (11.53)	84	0.10
	Master's	9 (10.2)	67.00 (5.89)		
Being Native	Yes	39 (44.3)	66.23 (14.38)	84	0.77
	No	49 (55.7)	67.06 (11.44)		

Correlations

Pearson's correlation analysis found no significant relationships between total attitude scores and age ($r = 0.181, p = 0.09$) or GPA ($r = –0.109, p = 0.34$). This suggests that students' academic performance and age were not major determinants of the students' attitudes toward their field or future career.

Regression Analysis

A multiple regression analysis examined the combined effects of demographic variables (gender, marital status, employment status, semester, academic level, and native status) on total attitude scores. The results showed that gender, marital status, and employment status were significant predictors of students' attitudes, while semester and native status were not (Table 2). This implies that social and demographic factors—rather than purely academic variables—play a central role in shaping students' attitudes, which aligns with the socio-cultural framework discussed later.

DISCUSSION

The present study aimed to examine the attitudes of speech and language pathology students at Mashhad University of Medical Sciences toward their field of study and future career prospects. The overall mean attitude score (61.19 ± 11.23) revealed a highly positive perspective, suggesting that most students view their chosen profession with optimism and motivation. This finding is particularly meaningful in the context of rehabilitation education in Iran, where speech therapy is still developing as an independent and recognized professional field. Understanding students' attitudes not only reflects the effectiveness of academic training but also provides insights into the broader cultural and social forces shaping their career expectations.

A significant gender difference emerged, with male students showing slightly higher positive attitudes than females. This pattern reflects broader cultural dynamics in Iranian society. In Iran, men often experience stronger social expectations to pursue financially stable and respected careers, while women may face greater uncertainty about long-term employment opportunities after graduation. These gendered perceptions of professional identity can influence how students evaluate their educational choices and career futures. This finding aligns with those of Nordholm et al.' study (1978), which emphasized that gender and societal norms play an essential role in shaping students' aspirations in health professions (17). Conversely, Greenwood et al. (2006) found minimal gender effects in the UK, where cultural attitudes toward gender roles in healthcare are more balanced. The difference highlights how contextual and cultural environments can significantly shape students' career-related attitudes (18).

Married and employed students reported significantly higher attitude scores compared to their single and unemployed peers. These results may reflect the stabilizing effect of marital and

Table 2. Regression analysis summary

Variable	B (Not Standardized)	Std. Error	B (standardized)	t	p	R^2	Adjusted R^2
Gender	-8.099	3.403	-0.251	-2.380	0.02	0.063	0.052
Marital Status	6.504	3.223	0.215	2.018	0.05	0.046	0.035
Employment Status	-9.649	3.355	-0.299	-2.876	0.01	0.090	0.079
Grade	6.481	3.917	0.178	1.655	0.102	0.032	0.020
Native Status	1.297	2.449	0.058	.530	0.598	0.003	-0.009

employment responsibilities. In Iranian culture, marriage and employment are commonly associated with social maturity, respect, and stability—values that contribute to individuals' self-confidence and optimism toward their future. These social factors may help explain why students who already occupy more stable life positions display stronger professional attitudes. This finding corresponds with that of Nordholm et al. (1978), who reported that students' circumstances, including family obligations, significantly shape their professional aspirations and attitudes (19).

Employment, in particular, offers students real-world exposure and validation of their career path, reinforcing their sense of competence and belonging in the field. This observation supports Bolukat et al.'s study (2024), which found that professional experience enhances self-efficacy and career motivation among health students (20).

The influence of marital status and employment on attitudes, as found in our study, is relatively novel in the context of speech and language pathology students. Greenwood et al. (2006) did not specifically address marital status but highlighted the importance of career awareness and early professional exposure in shaping positive attitudes (18). Nordholm et al. (1978) emphasized the role of prior experiences and employment in health-related fields in fostering positive attitudes and aspirations (19). Our finding that employed students had significantly higher attitude scores aligns with their observation that practical experiences contribute to a more positive professional outlook.

Interestingly, no significant differences were found in attitude scores across different semesters. This suggests that students' attitudes toward their field of study and career remain stable as they progress through their academic program. However, a trend indicated that Master's students had higher attitude scores than Bachelor's students, though this was not statistically significant. This trend could imply that advanced education levels strengthen students' confidence and positive outlook, possibly due to a deeper understanding and more substantial commitment to their field. Our study's finding of stable attitude scores across semesters contrasts with those of Greenwood et al. (2006), who reported that perceptions of speech and language therapy could evolve with increased awareness and understanding of the field (18). Similarly, Nordholm et al. (1978) found that students' aspirations and attitudes could change over time, influenced by their educational experiences and evolving career goals (19).

Additionally, no significant associations were found between students' attitudes and their age, GPA, or academic semester. This stability suggests that the university's educational environment provides a relatively consistent level of satisfaction across all stages of study.

However, from a cultural perspective, it may also indicate that students' expectations are shaped before entering university—by family influence, societal narratives about job prestige, and perceptions of financial security. Therefore, their attitudes remain relatively stable, regardless of academic progress. This insight is important for educators, as it implies that early-stage career counselling and orientation can have a strong impact on students' long-term motivation.

This interpretation complements Derakhshanrad et al.'s findings (2022), which emphasized the evolution of professional identity in Iranian occupational therapy students as a culturally influenced process. The interplay of cultural values, educational systems, and job market realities thus provides a rich context for understanding students' perspectives in speech therapy education (21).

According to the findings of this study, continued research should focus on longitudinal changes in

these attitudes and evaluate interventions that aim to foster sustainable motivation and satisfaction among future professionals.

However, this study is limited by its focus on a single university, which may not represent the broader student population. Moreover, it did not account for factors such as students' economic status, backgrounds of mental health issues, or overall life satisfaction, all of which could significantly influence their attitudes toward their field of study and career prospects. Therefore, recognizing the role of cultural and demographic factors in shaping attitudes can help universities design more effective support systems.

As such, the following steps can empower students to develop stronger, more autonomous professional attitudes—crucial for thriving in the evolving healthcare landscape:

• Institutions should provide career guidance programs that acknowledge gender and social realities.

• Internships and part-time employment can improve students' career confidence and bridge the gap between academic learning and real-world practice.

• Curriculum planners should incorporate cultural awareness training, emphasizing how social perceptions influence professional identity and motivation.

CONCLUSION

This study reveals that speech and language pathology students maintain positive career attitudes despite concerns about job competition, driven by optimism and motivation. However, these perspectives are deeply shaped by socio-cultural factors like family expectations and societal norms, particularly in the Iranian context. To support students, educational institutions and policymakers should implement mentorship, career counselling, and public awareness initiatives that clarify the profession's value and enhance job security. Ultimately, understanding professional identity formation requires a socio-cultural lens alongside psychological and educational approaches.

Ethical Considerations:

Ethical issues including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc. have been completely observed by the authors. The current study protocol was approved by the ethics committee of Mashhad University of Medical Sciences with the ethics code: IR.MUMS.REC.1402.007. Confidentiality of information, voluntary participation in the study, and ethics of publishing in reading and writing the article were considered.

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REFERENCES

1. Tarvirdizadeh H, Pashashrefi H, Saberi H. Construction and validation of a questionnaire on attitudes towards education and career future among students. Psychometrics. 2017;21(3):83-115. Persian.

2. Razieh E, Saeed H-A, Tayebeh R, Hamidreza Ba, Amouzadeh-KhaliliMohammad, aheb R, et al. Studying the views of professors and students of the Faculty of Rehabilitation at Semnan University of Medical Sciences on factors affecting students' academic progress in the academic year 2012-2013. Koomesh. 2015;16(2):220-8. Persian.

3. Zamanzadeh V, Ghahramanian A, Valizadeh L, Bagheriyeh F. Iranian nursing applicants' perception of the nursing profession: A qualitative study. Nursing open. 2023;10(6):3728-36. Persian.

4. RejaliMehri, MostajeranMahnaz, LotfiMehran. Health student attitude towards their field of study and future career in health faculty of Isfahan University of medical sciences- 2008 Journal of Health System Research. 2010;6(1):106-15. Persian.

5. Hamdi M, Soleimani B, Nasr Isfahani B, Mandegar H. Evaluation of graduate student from 1989 to 1994 In school of health regarding their employment or continuing eduaction. Res Med Sci J. 1998;3(1):32-6. Persian.

6. Nafiseh S, Station SP, Sohrab A. Attitudes of students at the School of Health, Isfahan University of Medical Sciences, towards their field of study and future careers in 2019. Iranian Journal of Education in Medical Sciences. 2004;4(1):76-81. Persian.

7. Sharifi Moghadam S, Rajati F, Naderi AH, Serajinejad MM, Mohebi S. Attitude of Medical Students in Preclinical Stage towards their Field of Study at Qom University of Medical Sciences (2015. Kowsar; 2016. Persian.

8. Sarikhani Y, Ghahramani S, Bayati M, Lotfi F, Bastani P. Determining factors influencing specialty preferences of Iranian medical doctors: a qualitative study. Iranian Journal of Medical Sciences. 2022;47(4):350.

9. Shafiei F, Amini-Rarani M, Ponnet K, Moeeni M. Hesitancy among Iranian nursing students regarding future career trajectory: a qualitative analysis. Human Resources for Health. 2024;22(1):2.

10. Crutchfield R, Gomez AT, Olivarez Z, Gonzalez CN, Anglin AL. Motivators and factors for Career Decision-Making in Speech Language Pathology Students. Contemporary Research in Disability and Rehabilitation. 2020;3(1):3.

11. Taheri Nassaj H. Medical students' attitude towards studying medicine. Iranian Journal of Medical Education. 2001;1(4):36-43. Persian.

12. Fekri A, Alizadeh S, Yargholi A, Sarafinejad A. Study of the medical students views about own future career. Journal of Reserch in Medical Sciences. 1998;3(1):90-3. Persian.

13. Rowsell R, Morgan M, Sarangi J. General practitioner registrars' views about a career in general practice. The British Journal of General Practice. 1995;45(400):601.

14. Watt CD, Greeley SAW, Shea JA, Ahn J. Educational views and attitudes, and career goals of md-phd students at the university of pennsylvania school of medicine. Academic

Medicine. 2005;80(2):193-8.
15. Mahmoudi Pour A. Evaluation of medical students attitude toward future job in Babol University of Medical Sciences, 2003. Journal of Babol University of Medical Sciences. 2006;8(1):86-95. Persian.
16. Satari J, Jamalian S, Seifoleslami A. The study of nursing, mid wifery and health students In Hamedan University of medical sciences towards their future career. Scientific Journal of Hamadan University of Medical Sciences and Health Services. 2001;7(4):15-9. Persian.
17. Adamson BJ, Sinclair-Legge G, Cusick A, Nordholm L. Attitudes, values and orientation to professional practice: A study of Australian occupational therapists. British Journal of Occupational Therapy. 1994;57(12):476-80.
18. Greenwood N, Wright JA, Bithell C. Perceptions of speech and language therapy amongst UK school and college students: implications for recruitment. International Journal of Language & Communication Disorders. 2006;41(1):83-94.
19. Nordholm LA, Westbrook MT, Walker B. Students entering speech pathology and other health professions: their backgrounds, attitudes and aspirations. Australian Journal of Human Communication Disorders. 1978;6(1):60-8.
20. Bolukat HS, Antigoni Fountouki R, Dimitris Theofanidis R. Nursing in Greece and Iran: A Narrative Comparison. International Journal of Caring Sciences. 2024;17(2):1197-204.
21. Derakhshanrad SA, Piven EF, Zeynalzadeh Ghoochani B. Evolution of professional identity in Iranian occupational therapy students and new graduates: A comparative study. British Journal of Occupational Therapy. 2022;85(4):231-40.