Development and Validation of a Questionnaire to Measure Social Competencies for Undergraduate Students

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ABSTRACT

Aim. This study aimed to develop and validate a social competencies scale (SOCS) for undergraduate students and examine the mean differences in SOCS across gender and family income.

Methods. This cross-sectional study comprised six stages. Stage I: Items Generation and Selection, the initial SOCS was constructed through literature reviews.

Stage II: Expert Reviewing, the items were further reviewed by experts to ensure content validity, clarity, and alignment with theoretical constructs. Stage III: Pilot Study, a pilot study was conducted with 20 undergraduate students. Feedback from this study was used to refine the wording and structure of the items. Stage IV: Construction of SOCS, this survey was administered to students from 15 universities in Thailand using a 5-point Likert scale. Exploratory Factor Analysis (EFA) was performed on responses from 955 students to identify the structure of SOCS. Stage V: Scale Validation, the SOCS measurement model was tested for reliability and construct validity using Confirmatory Factor Analysis (CFA). Stage VI: Comparison of Means Difference, independent t-test and ANOVA were conducted to compare mean differences in SOCS.

Results. The final SOCS model included six latent factors: self-responsibility (SRS), social relationships (REL), self-awareness (AWR), teamwork-building (TWB), social networking (NET), and communication (COM). The second-order CFA of SOCS fits the data adequately. Female students scored higher on SRS, REL, TWB, and COM, indicating significant gender differences but there was not significantly impacted by family income.

Conclusions. The results of this study demonstrated the basic psychometric properties of a new questionnaire to measure social competencies for undergraduate students that can be applied in similar contexts.

Keywords: social competency, social skills, social functioning, skills development, confirmatory factor analysis

Introduction

Social competencies are a form of human capital that hold significant importance for both individual and organisational competitiveness (John et al., 2023). These competencies play a crucial role in enabling individuals to collaborate more effectively and efficiently. As emphasised by Mansura Nusrat and Nafia Sultana (2019) and Chiara Succi and Magali Canovi (2020), social competencies are key employability skills for graduates. Such a construct, in particular, emerges from meaningful interactions with others in a variety of situations (Junge et al., 2020).

Consequently, higher education institutions (HEIs) strongly emphasise the development of students' social competencies alongside their academic skills to prepare them for success in personal life, the labour market, and their future careers (García-Álvarez et al., 2022). Such competencies encompass a range of abilities, including the capacity to motivate others, proficiency in public speaking, effective presentation skills, strong communication skills, and the ability to build and maintain relationships (Ćurlin et al., 2020; Garrote & Moser, 2021). These competencies

also involve adjustment skills and self-preparation skills for future development in the workplace (Owusu et al., 2022; Thomas, 2020; Thomas et al., 2023).

In the literature, social competencies have been measured in various contexts, and many theorists have used the construct "social competence" interchangeably with "social skills" and "social functioning" (Cordier et al., 2015). Furthermore, researchers have developed and validated instruments to investigate students' social competencies in developing life skills, fostering friendships, improving communication with others, and practising professional skills (Pirsl et al., 2019). For example, Esther Leganés-Lavall and Santiago Pérez-Aldeguer (2016) developed the social competency scale for Spanish students, comprising 40 items encompassing a set of social skills, team cohesion, and group climate. The results indicated its validity and reliability for measuring the social competency of higher education students within the Spanish context. Using a Polish sample, Agnieszka Koszałka-Silska et al. (2021) tested the instrument of Anna Matczak (2001), which measured three levels of social competence, (those revealed in social disclosure situations, assertive situations, and situations of close interpersonal contact), and found that instrument had good reliability. In comparison, Heejeong Sophia Han and Kristen Mary Kemple (2006) measured six components of social competence: self-regulation, interpersonal knowledge and skills, positive self-identity, cultural competency, adoption of social values, and planning and decision-making skills. Furthermore, Caroline Junge et al. (2020) proposed that the fundamental components of social competence should encompass social encoding, awareness and identification of social issues, problem-solving, emotion regulation, communication, and empathy, which are crucial for effective participation in meaningful interactions (Junge et al., 2020). Alina Gabriela Negoescu et al. (2019) emphasised the importance of social competencies, particularly in the realm of communicative competence, as a vital component for acquiring foreign language proficiency and navigating real-life challenges.

In Thailand, several studies have explored the dimension of social competencies, particularly as soft skills for students. For instance, Kornkanok Lertdechapata and Pattamaporn Pimthong (2021) conducted a qualitative study comparing Thai and international students' competencies, drawing on documents from organisations such as UNESCO and OECD. Social competencies are also a focus for educational administrators, as seen in the work of Tongaew Damang et al. (2021) who outlined various indicators of social competencies, including leadership soft skills, for education sector administrators. Despite the advocacy of *Krathrwng ṣ̣ụkṣ̄'āṭhikār (pratheṣ̣thiy)* (Ministry of Education of Thailand—MOE) for improving competency-based education to enhance the quality of its graduates (MOE, 2019, 2022), the development of social competencies scale (SOCS) remains limited. This is especially true in terms of employing robust analytical methods, such as confirmatory factor analysis (CFA) and structural equation modeling (SEM), to create effective tools for improving students' social competencies.

In addition, other areas should also be considered in developing SOCS for Thai students, which are also critical in ensuring that such students are prepared for and actively involved in the complex world (Khampirat, 2020; Khampirat, 2024). First, there is a need to understand the complexity of developing the social competencies necessary for work and later life. Second, an index should be established that points out different ways to develop students' social competencies and bridge the gap between higher education outcomes and the needs of the labour market. Third, past measurements in the context of Thai society are still unclear. The construct of measuring and accessing skills related to social competence has not yet been related to the workplace. The final reason is to recognise the dramatic changes in today's environment affecting the concept of social competence.

Objectives

This study has the following objectives:

- To develop and validate a new instrument to measure social competencies relevant to the labour market needs.
- To examine the mean differences in social competencies between genders and different family incomes.

Literature Review

Concept of Social Competencies

"Social competencies" are a critical skills set for university students for adapting to the complex social and academic environment of higher education (Junge et al., 2020; Mallinckrodt, 2000). These competencies include interpersonal and intrapersonal skills, and are essential for personal growth in the future (Anggraeni & Tarmidi, 2021). Scholars have discussed social competencies under a variety of names, such as "soft skills," "noncognitive skills," "social–emotional intelligence," "social and emotional competency," and "social intelligence" (Schoon, 2021). In other words, this concept represents the combination of people, social and communication skills, cognitive skills, personality traits, attitudes, mindsets, behaviour, and social and emotional traits, among others, which are considered desirable in all professions for successful self-management and social adaptation (Llorent et al., 2020; Schoon, 2021).

Kelvin Mwita et al. (2023) reported that HEIs have identified the top five most relevant soft skills that should be promoted among their students: communication, leadership, decision-making, teamwork/orientation and problem-solving. Especially for students involved in practical work experiences, such as apprenticeships and on-the-

job training, soft skills, including social competencies (e.g., workplace relationships, people-oriented generic skills, self-awareness, emotional intelligence, teamwork, work-ethic skills, and communication), play a crucial role in achieving success in their respective professional endeavours (Baird & Parayitam, 2019). These skills can be applied in a variety environments (Pagnoccolo & Bertone, 2021).

Developing Social Competencies in Thailand

Since 2019, the Ministry of Education of Thailand has been promoting competency-based education to enhance the quality and competitiveness of graduates (MOE, 2019, 2022). In line with this initiative, the Samnakngan Lekhatikarn Sapha Kan Sueksa (OEC, 2019) has been actively engaged in promoting competency-based curricula and enhance student capabilities. However, Thailand continues to struggle with students' lack of certain critical skills that meet labour market demands, including the quality of social competencies, resulting in the need to continuously improve the education system and learning outcomes (Saphaphatthanakansetthakit Lae Sangkhom Haengchat [NESDC], 2023).

Marieke Vandeweyer et al. (2020) have pointed out that Thailand must focus on developing students' relevant skills at all education levels and addressing skill imbalances, which have so far led to significant worker mismatch of 37%, thus contributing to a high unemployment rate for graduates from 2016 to 2023 (MHESI, 2023). In addition, the decline in the country's competitiveness ranking highlights the significance of policy stability, research and development (R&D) investments, and a skilled workforce (IMD, 2020). To address this issue, targeted support, including career guidance and training in high-demand skills, is recommended (Vandeweyer et al., 2020).

At present, Thailand faces the challenge of effectively developing students' social competencies to reach the international level of competitiveness (Lertdechapata & Pimthong, 2021), including bridging the skill gap between graduate employers and producers, and enhance competency to enrich education and increase the employability of graduates (Khampirat & Pop, 2017). Other challenges include the mismatched skills between graduates and workplaces (Satimanon, 2017). While social competencies as soft skills consist of information communication technology competencies related to work, self-esteem and self-regulated learning also play a significant role in student development, Indeed, Thai education R&D faces certain limitations (Khampirat, 2021a). However, previous studies have only focused thus far on comparing Thai students' competencies with international standards, such as UNESCO and OECD (Lertdechapata & Pimthong, 2021), with limited explorations into their impacts on learning outcomes, employability, and career achievement (Sa-Nguanmanasak & Khampirat, 2019).

Critical factors such as graduate achievement, university ranking, and national competitiveness have all constrained the implementation and evaluation of Thailand's educational policy (Chitralada & Ahmad, 2021). To enhance higher education, there is a need to prioritise quality improvement and address factors, such as skill gaps and social competencies (NESDC, 2023), as well as various socioemotional competencies to cope with the global challenge, rapid technological changes, and complex societies (Cebollero-Salinas et al., 2022). In addition, sociodemographic background (e.g., gender (Kim et al., 2022), year of study, major, and family background) as a proxy for socioeconomic status has also affected career aspiration achievement; therefore it should also be considered as a crucial factor for student development (Kunchai et al., 2021).

Methods

Study Design

The process of item development and instrument validation for the proposed SOCS was carried out in the following six stages: (I) item generation and selection, (II) expert reviewing, (III) pilot study, (IV) construction of the SOCS, (V) scale validation, and (VI) comparison of means differences in SOCS across gender and family income. An overview is presented in Figure A1.

Participants

This cross-sectional study involved 955 students enrolled in 15 different universities across various parts of Thailand. Among them, 191 were males (20%), and 764 were females (80%). The majority of the participants were between 19 and 22 years, indicating a typical undergraduate age range. The participants' academic performance varied, with GPAs mostly ranging from 2.51 to 3.50 (28.80%). The most common majors were Business Administration/Management (n = 309, 32.36%) and Marketing (n = 279, 29.21%) and were in their final year of undergraduate study (n = 391, 40.94%), suggesting a mature academic cohort. The majority of the participants' fathers had either primary (n = 336, 35.18%) or secondary (n = 361, 37.80%) education. Similarly, most mothers had primary (n = 313, 32.44%) or secondary (n = 388, 40.63%) education levels. The most common family income bracket was 296.21–593 USD (n = 380, 39.79%). Other income groups included under 296.21 USD (n = 140, 14.66%) and 594–1,185 USD (n = 194, 20.31%) (Table A1).

Data Collection

After item generation and a pilot study, this study recruited and collected data between 25/03/2022 and 15/12/2022 using a stratified random sampling approach, adhering strictly to ethical standards and principles. Regarding contact with human participants, participants were provided with sufficient information about the study verbally before providing consent. Data was collected anonymously using Google Forms across 15 universities in Thailand. Participants were provided detailed instructions for the purpose of the study and could withdraw from the survey at any time. Recruitment of participants was carried out in collaboration with educators and support stall, as well as through Facebook and email. Upon recruitment, the participants independently submitted their responses to questions that assessed their social competencies. The consent process was integrated at the beginning of the online survey, requiring the participants to explicitly agree before proceeding, thereby ensuring their voluntary engagement in the study.

Ethics Approval and Consent to Participate

This study obtained ethical approval from the Ethics Committee at Suranaree University of Technology, Thailand (EC-64–128) and was conducted in accordance with the guidelines of the Declaration of Helsinki. The data collection in this study was based on verbal consent from all participants, as the risk involved was no greater than what they would encounter in their daily activities. If a participant chose not to answer a question, they were free to decline without any consequences. Each participant's verbal consent was recorded alongside their responses to ensure clear documentation of their willingness to participate.

Statistical Analysis

The mean (M), standard deviation, kurtosis (KU), and skewness (SK) were calculated to describe each item of SOCS. Exploratory factor analysis (EFA) was conducted to identify the initial factor structure of the instrument. After EFA, CFA is used to confirm the factor structure identified in the EFA. This step was a test to see how well the model fits the empirical data. Various fit indices, such as the comparative fit index (CFI), Tucker–Lewis Index (TLI), and root mean square error of approximation (RMSEA), were calculated to evaluate the adequacy of the model. Finally, an independent sample t-test and Analysis of Variance (ANOVA) were used to examine the mean differences in SOCS.

Results

Stage I: Item Generation and Selection

In Stage I, the primary goal was to create a new tool for assessing the social competencies of students. This phase was based on theory, an extensive review of existing literature, and prior instruments. The reviewed instruments covered a wide range of social competencies, including problem-solving, collaboration, social awareness, social skills, empathy, social media usage, relationship management, resilience, ethical behaviour, achievement orientation, self-discipline, imitation, self-assurance, conscientiousness, emotional aptitude, self-awareness, self-efficacy, and self-management (Liang et al., 2022; O'Connor et al., 2022; Stolz et al., 2022) (Table A2).

To obtain new items that are appropriate for measuring SOCS for labour market needs, existing items from previous studies listed in Table A2 were selected. Drawing from the definition of social competencies, underlying concepts, related skills, and insights gleaned from previous studies, this research has been able to construct 59 initial items (as outlined in Table A3) to analyse and validate the social competency scale. All 59 items were positive questions and wordings to prevent potential problems associated with negatively worded items, including confusion in survey responses, distortions in the validity and reliability of survey instruments, and burden of data processing (Chyung et al., 2018; Netemeyer et al., 2003).

Stage II: Expert Reviewing

The initial 59-item SOCS was evaluated by seven experts, each with experience in assessing social competencies in workplace settings. These experts were tasked with assessing the quality of each item and offering feedback to enhance their appropriateness and clarity. Here, the index of item–objective congruence (IOC) (Rovinelli & Hambleton, 1977) was employed to analyse the content validity as judged by these experts. An IOC scoring range between 0.80 and 1.00 is considered acceptable, indicating that the content is suitably aligned with its intended purpose.

Stage III: Pilot Study

Subsequently, the questionnaire was subjected to a pilot study involving 20 students who were not part of the main study. This pilot phase was critical in refining the questionnaire. The final iteration of the SOCS, which was developed by the research team, consisted of 59 items rated on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree).

Stage IV: Construction of SOCS-Exploratory Factor Analysis

After the stage of pilot study, EFA was conducted using principal component analysis and varimax rotation to unravel the factor structure. This analysis aimed to categorise the items into distinct dimensions. The data or the sampling adequacy for factor analysis were verified through Bartlett's test of sphericity ($p < 0.05$) and the Kaiser–Meyer–Olkin test (KMO > 0.05) (Dziuban & Shirkey, 1974; Kaiser, 1960). The EFA results had 58 items of the initial 59 items loaded adequately on the six-factor structure for the SOCS. Selecting factors were considered based on eigenvalues greater than 1, and only items with factor loadings more than 0.40 were included. Thus, 1 item was removed because the item loaded less than 0.4 on all factors. The identified factors were self-responsibility skills (21 items, SRS1–SRS21), social relationship skills (8 items, REL22–REL29), self-awareness skills (10 items, AWR30–AWR39), teamwork-building skills (5 items, TWB40–TWB44), social networking skills (10 items, NET45–NET54), and communication skills (4 items, COM55–COM58). Therefore, this process effectively grouped the 58 items into these coherent dimensions, clearly providing a structured foundation for the SOCS (Table A4).

Reliability Analysis

Cronbach's alpha serves as a metric for assessing reliability or internal consistency. Typically, a value exceeding 0.7 is considered acceptable, indicating that the items are consistently measuring the same underlying concept. In this study, Cronbach's alpha values ranged between 0.857 and 0.912, all surpassing the 0.7 threshold, with some exceeding 0.9. These results suggest a high level of reliability, indicating that the items are likely to constitute a dependable measure of the SOCS construct (Table A4).

Stage V: Scale Validation — Confirmatory Factor Analysis

The CFA for SOCS was conducted using Mplus software (Table A5 and Figure A2). This analysis assessed the factor structure derived from the EFA. In particular, the CFA employed covariance matrices and maximum likelihood estimations. Model fit was evaluated using several criteria, including the chi-square/degree of freedom ratio ($\chi 2/df \leq 3$), RMSEA (< 0.05), standardised root mean square residual (SRMR < 0.08), TLI (> 0.90), and CFI (> 0.90) (Bollen, 1989; Schreiber et al., 2006). The results showed the SOCS construct had a good fit. To assess convergent and discriminant validity, the average variance extracted (AVE ≥ 0.5) and composite reliability (CR > 0.6) values were also calculated (Fornell & Larcker, 1981; Hair et al., 2014). The results indicated good reliability and an acceptable range for CR values, although AVE values for all factors were

below 0.5. Despite this, the validity was still deemed acceptable due to the high CR values, and the AVE value was lower than the CR value (Ayaz & Yanartaş, 2020; Hair Jr et al., 2017; Owusu et al., 2022). The range of standardised factor loadings, which was from .414 to .780, indicated that the magnitude of the relationship between the observed indicator and the latent construct was adequate. Researchers can benefit from factor loadings as they show how much an item's scores change when the latent construct changes by one unit. In this case, a higher factor loading is more responsive to variations in the underlying latent construct than lower loading items. The value of the item R-square shown in Table A5, also called squared multiple correlations, shows the proportion of variance in the latent factor that is explained by that item. The R-square values in this study range from .172 to .608. Here, a higher R-squared value indicates better reliability.

Stage VI: Comparison of Means Differences in Social Competency Skills

In this stage, independent sample t-tests and One-Way ANOVA were utilised to examine mean differences in six social competency skills among gender and family income (Tables A6 and A7). Based on the results presented in Table A6, which compared the means of six social competency skills between male and female students using independent sample t-tests, statistically significant differences were observed in self-responsibility skills ($t = -2.131$, $p = 0.033$), social relationship ($t = -1.987$, $p = 0.047$), teamwork-building ($t = -3.098$, $p = 0.002$), and communication ($t = -2.470$, $p = 0.014$) skills. In particular, female revealed higher mean scores in social relationship, teamwork-building, and communication skills compared with males. However, no significant differences were found in self-awareness ($t = -1.597$, $p = 0.111$) and social networking ($t = 0.610$, $p = 0.542$) skills between the two genders. These results suggest gender disparities in certain social competencies among the study participants, thereby highlighting areas where targeted interventions or support may be beneficial for enhancing skill development in specific demographic groups.

Table A7, which presents the results of One-Way ANOVA, compares the mean differences of social competency skills between family income levels. The results indicated that there were no statistically significant differences in self-responsibility, social relationship, self-awareness, teamwork-building, social networking, and communication skills among different income groups ($p > 0.05$). This finding implies that family income may not be a significant predictor of social competency skills among the study participants.

Discussion

The development of the social competencies scale (SOCS) drew upon the existing literature and theory to identify key components relevant to labor market needs.

The identified items align with previous research on social competencies (Bolsoni-Silv et al., 2011; Han & Kemple, 2006; Hoffman et al., 2021), which revealed similar dimensions of social skills relevant to labour market success (Fundinho et al., 2021; González-Pérez & Ramírez-Montoya, 2022; Renatovna & Renatovna, 2020). This consistency suggests that the SOCS captures essential aspects of social competencies identified in prior studies and is consistent with theories related to the measurement of social competency skills, namely social learning (Bandura, 1971) and emotional intelligence (Salovey & Mayer, 1990) theories. Furthermore, Cronbach's alpha values exceeding 0.7, indicative of strong internal consistency reliability (Nunnally, 1978), are consistent with established criteria for instrument validation (Hair et al., 2014). This consistency with past research and theory enhances confidence in the reliability and validity of the SOCS as a measurement tool for assessing social competencies.

The validation process, including expert reviewing, pilot testing, EFA, and CFA, provided evidence supporting the validity and reliability of the SOCS. The high content validity index (IOC) scores obtained from expert evaluations indicate that the items are aligned with the intended construct. Furthermore, the EFA and CFA results confirmed that the final version of the SOCS, comprising 58 items loading onto six factors, demonstrated acceptable reliability and excellent construct validity. The factor loading values provide insights into the intensity of the connection between each indicator and the underlying latent factor. In particular, the indicators with the highest factor loading values for self-responsibility, social relationship, self-awareness, teamwork-building, social networking, and communication skills (SRS7, REL22, AWR35, TWB41, NET50, and COM55, respectively) reflect their importance in measuring their corresponding factors. In addition, the finding that teamwork-building emerged as the most important factor for measuring social competencies is consistent with the social learning theory proposed by Albert Bandura (1971). In this theory, Bandura posited that individuals learn social behaviour, including teamwork skills, through observation, imitation, and modeling, which are particularly relevant in the context of workplace interactions (Bandura, 1971; Pop & Khampirat, 2019). Indeed, contemporary research has underscored the critical role of teamwork and collaboration in fostering career success and job satisfaction (Ashiq et al., 2023).

The comparison of social competency scores between genders revealed statistically significant differences in self-responsibility, social relationship, teamwork-building, and communication skills. These findings are consistent with existing studies that have identified gender differences in a variety of skills (Atabey & TopÇU, 2021; Borbely & Némethi-Takács, 2023; McTaggart et al., 2022), work skills (Khampirat, 2021b; Naukkarinen & Bairoh, 2022; Pető & Reizer, 2021), and social competencies (Fundinho et al., 2021; Major et al., 2023; Marín-López et al., 2020; Portela-Pino et al., 2021). These gender differences can be interpreted based on the self-construal

theory of gender, where women place greater emphasis on group relationships while men place more emphasis on the collective group (Baumeister & Sommer, 1997; Flinkenflogel et al., 2017). Furthermore, the comparison of family income levels did not yield statistically significant differences in social competency scores, suggesting that family income may not be a significant predictor of social competencies among the study participants.

The abovementioned results contribute to the understanding of demographic factors influencing social competence and highlight areas for targeted intervention and support. These findings corroborate previous research by Sofia O. Major et al. (2023) and João Filipe Fundinho et al. (2021), who similarly found gender differences in specific social competencies. However, the lack of significant differences in social competency scores based on family income is inconsistent with several previous studies, which suggest that income, parental education, or family structure may play a more significant roles in shaping social competence (Alban Conto et al., 2021; Daines et al., 2021; Xi & Wang, 2024). A systematic review conducted by Kerris Cooper and Kitty Stewart (2021) supported the notion that household income has a positive causal effect on cognitive and social skill development. However, how gender and family income can or cannot be associated to social competencies must also be clarified further. Finally, using SOCS may have a positive impact on work adaptability.

Implications

Theoretical Implications

This instrument not only addresses the need to measure SOCS for labour market needs in order to lay the groundwork for further validation studies but also provides social science researchers with the ability to quantitatively measure SOCS relevant to a wide range of research topics. Future research could also focus on conducting additional validation studies to further establish the reliability, validity, and generalisability of the instrument across different populations, contexts, and settings. At the same time, intervention studies could explore the effectiveness of targeted interventions designed to enhance social competencies among individuals across different age groups and populations. By implementing evidence-based interventions and assessing their impact on social competency development, researchers can identify effective strategies for promoting positive social outcomes and addressing social skill deficits in diverse educational, organisational, and community settings. Moreover, research could investigate the relationship between social competencies and various employment outcomes, such as job performance, job satisfaction, career advancement, and organisational success. By examining the impact of social competencies on employment outcomes,

researchers can provide valuable insights for employers, policymakers, and educators seeking to enhance workforce readiness and success.

Practical implications

The implications for practice are multifaceted and extend to various stakeholders involved in education, training, and workforce development.

- *Educational institutions*: The development and validation of the SOCS offer a valuable tool that would allow educational institutions to assess and enhance students' social competencies. Institutions can integrate the SOCS into their curricula to ensure that students acquire interpersonal and intrapersonal skills that are necessary for achieving success in the labor market (Griffiths et al., 2024; Poveda-Brotons et al., 2024). In particular, the identification of gender differences in certain social abilities highlights the importance of targeted intervention within the educational environment. Institutions can design programmes and initiatives to deal with these differences and provide various forms of support that are tailored to the unique needs of male and female students.
- *Employers and workforce development agencies:* Employers can utilise the SOCS as a screening tool during recruitment processes to assess candidates' social competencies. By identifying individuals with strong interpersonal skills, employers can make more informed hiring decisions and build teams that are capable of collaborating effectively in diverse professional environments. Workforce development agencies can also use the findings of this study to design training programs aimed at enhancing social competencies among employees. In this way, organisations can foster a more productive and cohesive workforce by providing opportunities for skills development in areas such as communication, teamwork, and self-awareness (Chonsalasin & Khampirat, 2022).
- *Individuals and career counselors:* Individuals can use the SOCS as a self-assessment tool to identify their strengths and areas for growth in social competencies. Career counsellors can assist individuals in interpreting their individual SOCS scores and help develop strategies for enhancing their interpersonal and intrapersonal skills and ultimately achieving their career goals (Saga et al., 2023).

Research Limitations and Suggestions

The results of this study had some limitations in terms of generalisability because the majority of participants were students in HEIs. In future studies, the participants should be expanded to target new graduates or young people who have just entered the labour market, allowing researchers to assess their social competencies more clearly. In addition, reporting variable measurements is a self-assessment. Thus, it may be necessary to add behavioural measurement studies that can capture additional insights, such as observing behaviour in the workplace. For this CFA, we also did not perform

invariance analysis, which tests for equivalent across subgroups in the model form, factor loadings, item intercepts, and residuals. Therefore, further research should test the measurement invariance. Incorporating such tests could help provide an in-depth understanding of how items may have different relationships with latent variables across groups. Variance testing can also be used to determine whether a scale performs equivalently at two different time points, which is important for measuring change over time.

Conclusions

This study successfully achieved its objectives by developing and validating a new instrument, the SOCS, which was designed to measure essential interpersonal and intrapersonal skills relevant to labour market needs. Through a rigorous validation process involving expert review, pilot testing, and CFA, the SOCS demonstrated strong reliability and validity, in accordance with the established criteria for instrument validation. Furthermore, the examination of mean differences in social competence between genders and different family incomes provided valuable insights into demographic factors that influence social competency levels. While gender differences were observed in specific social competencies, no significant differences were found based on family income levels. These findings contribute to the understanding of social competency dynamics and highlight the importance of addressing gender-related differences in skills development. Moving forward, the SOCS can serve as a valuable tool for assessing and addressing social competencies deemed essential for success in diverse professional contexts, with interventions aimed at enhancing workforce readiness and promoting inclusive economic growth.

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Appendix available online.

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