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Evaluating the Impact of Simulation-Based Case Conferences on Social Work Students' Field Placement Performance

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ABSTRACT

Simulation-based case conferences, developed collaboratively with the Ministry of Social and Family Development (MSF), aim to increase students' competency in managing real-life internship case conferences. There is a significant gap in evidence-based approaches that effectively bridge theoretical knowledge with practical application in social work education, particularly in preparing students for complex multi-agency case conferences. Therefore, this study examines the effectiveness of this approach in preparing students for internship challenges and its influence on their confidence, decision-making abilities, and overall case conference performance. The research methodology incorporated three validated assessment tools: the Simulation Effectiveness Tool, Self-Efficacy in Clinical Skills Scale, and Social Work Skills Inventory. These were contextualised within Nanyang Polytechnic's (NYP) Social Work simulation framework to create comprehensive pre- and post-training surveys. The study involved Year 3 students from NYP's Diploma in Social Work programme. Qualitative analysis of learners' perceptions provided additional insights into the training's effectiveness during field placements. The findings revealed significant positive outcomes in students' preparedness for real-world case management, confirming simulation-based training's value in bridging theoretical and practical aspects of social work education. The research highlights simulation-based learning's effectiveness in developing practical skills, with the MSF partnership demonstrating the benefits of external agency collaboration in creating relevant training scenarios.

Keywords: Social Work; Simulation Based Training; Placement; Professional Development; Clinical Competency

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1. Introduction

The persistent challenge in social work education lies in effectively connecting theoretical knowledge with practical application. Simulation-based training has emerged as an innovative pedagogical approach to enhance student preparedness for real-world scenarios^[1]. This study examines the effectiveness of simulation-based case conferences, developed through collaboration with the Ministry of Social and Family Development (MSF), in developing students' competencies for managing real-life case conferences during internships.

The transition from classroom learning to professional practice represents a critical juncture in social work education. Recent studies indicate that students often experience significant anxiety and uncertainty when confronting real-world cases for the first time^[2]. This gap between theoretical understanding and practical application has prompted educators to seek innovative pedagogical approaches that better prepare students for field placement challenges^[3].

Simulation-based learning has gained recognition as a powerful educational tool across various professional disciplines. In social work education specifically, simulation offers unique opportunities for students to develop critical thinking, decision-making skills, and professional confidence in a controlled environment^[4]. The integration of realistic scenarios, immediate feedback mechanisms, and structured reflection processes provides a comprehensive learning experience that traditional classroom instruction alone cannot achieve^[5].

The collaboration with MSF in developing simulation scenarios represents a significant step toward ensuring the authenticity and relevance of training experiences. This partnership approach aligns with recent research emphasizing the importance of industry-academia collaboration in professional education^[6]. By incorporating real-world case complexities and current practice challenges, the simulation-based training aims to better prepare students for the multifaceted nature of social work practice.

This research specifically focuses on how such training influences students' confidence, decision-making capabilities, and overall performance in actual case conference settings. The study addresses two primary research questions:

1. How does simulation-based training impact the competency levels of social work students during their field work placements?
2. What are the perceptions of the students on the simulation-based training?

By examining these questions through both quantitative and qualitative lenses, this study aims to contribute to the growing body of knowledge regarding effective pedagogical approaches in social work education. The findings have implications for curriculum development, professional preparation, and the broader field of social work education.

2. Literature Review

2.1. Theoretical Foundations of Simulation-Based Learning

Simulation-based learning in social work education is grounded in several complementary theoretical frameworks that collectively support its pedagogical effectiveness. Experiential learning theory, as articulated by Kolb^[7] and further developed by contemporary scholars like Dillard et al.^[8], provides the foundational understanding of how students learn through direct experience, reflection, abstract conceptualisation, and active experimentation. This cyclical process is particularly relevant to social work education, where the integration of theoretical knowledge with practical skills is essential for professional competence^[9].

Social cognitive theory, originally developed by Bandura^[10] and recently applied to professional education contexts^[11], offers additional insights into the mechanisms through which simulation-based learning operates. The theory's emphasis on observational learning, self-efficacy development, and the reciprocal interaction between personal, behavioural, and environmental factors provides a robust framework for understanding how simulation experiences contribute to professional development^[12]. Recent research by Bogo^[13] has demonstrated that simulation-based training significantly enhances students' self-efficacy beliefs, which in turn predict better performance in real-world practice settings.

Constructivist learning theory further supports the use of simulation in social work education by emphasising the active role of learners in constructing knowledge through mean-

ingful experiences^[14]. This theoretical perspective suggests that learning is most effective when students are actively engaged in authentic tasks that mirror real-world challenges^[15]. Simulation-based case conferences provide precisely this type of authentic learning environment, allowing students to construct professional knowledge through guided practice and reflection^[16].

2.2. Evolution and Current State of Simulation in Social Work Education

The application of simulation in social work education has evolved significantly over the past two decades, moving from simple role-playing exercises to sophisticated, technology-enhanced learning environments^[17]. Early implementations focused primarily on basic interviewing skills and client interaction techniques^[18], but contemporary approaches encompass complex multi-stakeholder scenarios that reflect the interdisciplinary nature of modern social work practice^[4].

Recent developments in simulation methodology have incorporated standardised clients, virtual reality environments, and computer-based simulations to create increasingly realistic learning experiences^[9]. Research by Meredith et al.^[19] demonstrated that standardised client interactions improved students' interviewing skills by an average of 40% compared to traditional role-play methods, whilst Steen et al.^[9] reported significant improvements in crisis intervention skills through virtual reality-based training. These technological advances have expanded the possibilities for simulation-based learning whilst maintaining the core benefits of experiential education^[12].

The integration of simulation into social work curricula has also been influenced by broader trends in professional education, particularly the emphasis on competency-based learning and outcome measurement^[6]. Professional accreditation bodies have increasingly recognised the value of simulation in developing and assessing professional competencies, leading to greater adoption of these methods across social work programmes^[20]. This institutional support has facilitated the development of more sophisticated simulation programmes and the establishment of best practices for implementation^[5].

2.3. Competency Development through Simulation

Contemporary frameworks for social work education emphasise the integration of theoretical knowledge with practical skills through competency-based approaches^[6]. Building on Kourgiantakis et al.^[21]'s model of Holistic Competence, recent research has expanded our understanding of how simulation contributes to professional competency development across multiple domains^[13]. These domains encompass technical competence, including assessment, intervention, and documentation skills; interpersonal competence, encompassing communication, relationship-building, and cultural sensitivity; and critical thinking competence, involving analysis, decision-making, and ethical reasoning.

Research by Kourgiantakis and Lee^[22] has demonstrated that simulation-based training produces measurable improvements in all three competency domains, with particularly strong effects on interpersonal and critical thinking skills. Their longitudinal study of 156 social work students found that those who participated in simulation-based training showed significantly greater competency development compared to students receiving traditional instruction alone. These findings align with broader educational research suggesting that experiential learning approaches produce more robust and lasting skill development^[23].

The development of professional identity through simulation has emerged as another important area of research. Studies by Asakura and Bogo^[24] and Asakura^[16] have shown that simulation experiences contribute significantly to students' understanding of their professional role and responsibilities. This identity development appears to be facilitated by the opportunity to practice professional behaviours in realistic contexts, receive feedback from experienced practitioners, and reflect on their experiences with peers and supervisors^[8].

2.4. Effectiveness of Simulation-Based Training

A substantial body of research has accumulated demonstrating the effectiveness of simulation-based training in social work education. A comprehensive meta-analysis by Thompson and Thompson^[25] examined 47 studies involving over 3,000 social work students and found consistent

evidence of positive effects across multiple outcome measures. Effect sizes ranged from moderate to large ($d = 0.65$ to 0.89) for measures of clinical decision-making, professional confidence, and skill demonstration. These findings were consistent across different types of simulation modalities and student populations, suggesting robust effectiveness of the approach.

Longitudinal studies have provided particularly compelling evidence of simulation's impact on professional development. Research by Baker and Jenney^[15] followed 200 social work graduates for three years after programme completion and found that those who had participated in extensive simulation training demonstrated superior performance ratings from supervisors and clients compared to graduates from traditional programmes. Similarly, a study by Jefferies et al.^[14] found that simulation-trained students showed greater retention in the profession and faster progression to advanced practice roles.

The mechanisms through which simulation produces these positive outcomes have been the subject of considerable research attention. Studies suggest that the combination of realistic practice opportunities, immediate feedback, and structured reflection creates optimal conditions for learning^[11]. The safe learning environment provided by simulation allows students to make mistakes and learn from them without real-world consequences, whilst the presence of experienced facilitators ensures that learning is guided and supported^[12].

2.5. Assessment and Evaluation in Simulation-Based Learning

The assessment of learning outcomes in simulation-based education requires sophisticated approaches that can capture both the complexity of professional competencies and the nuanced nature of skill development^[26]. Traditional assessment methods, whilst useful, may not adequately capture the multidimensional nature of professional competence developed through simulation experiences^[27]. This has led to the development of more comprehensive assessment frameworks that incorporate multiple data sources and assessment methods.

Recent research has emphasised the importance of au-

thentic assessment approaches that mirror real-world practice demands^[28]. These approaches typically combine direct observation of performance, self-assessment measures, peer evaluation, and supervisor ratings to provide a comprehensive picture of student competency development^[29]. The use of video recording in simulation sessions has also enabled more detailed analysis of student performance and the development of more precise feedback mechanisms^[11].

The development of valid and reliable assessment tools specifically designed for simulation-based learning has been a priority for researchers in the field^[30]. The Simulation Effectiveness Tool, Self-Efficacy in Clinical Skills Scale, and Social Work Skills Inventory used in this study represent examples of instruments that have been specifically validated for use in social work simulation contexts^[27]. These tools provide standardised measures that enable comparison across different programmes and student populations whilst maintaining sensitivity to the specific learning outcomes targeted by simulation-based training.

2.6. Competence Development

Through Simulation Contemporary frameworks for social work education emphasize the integration of theoretical knowledge with practical skills^[6]. Building on Kourgiantakis et al.^[21]'s model of Holistic Competence, recent research by Bogo^[13] has expanded our understanding of competency development in social work education. Their work identifies three key domains of professional competence:

1. Technical Competence: Including assessment, intervention, and documentation skills;
2. Interpersonal Competence: Encompassing communication, relationship-building, and cultural sensitivity;
3. Critical Thinking Competence: Involving analysis, decision-making, and ethical reasoning.

The NYP Social Work Simulation Framework (**Figure 1**), informed by current research in educational psychology and social work practice, provides a structured approach to developing these competencies^[20]. This framework aligns with emerging evidence suggesting that integrated learning approaches yield superior outcomes in professional education^[5].

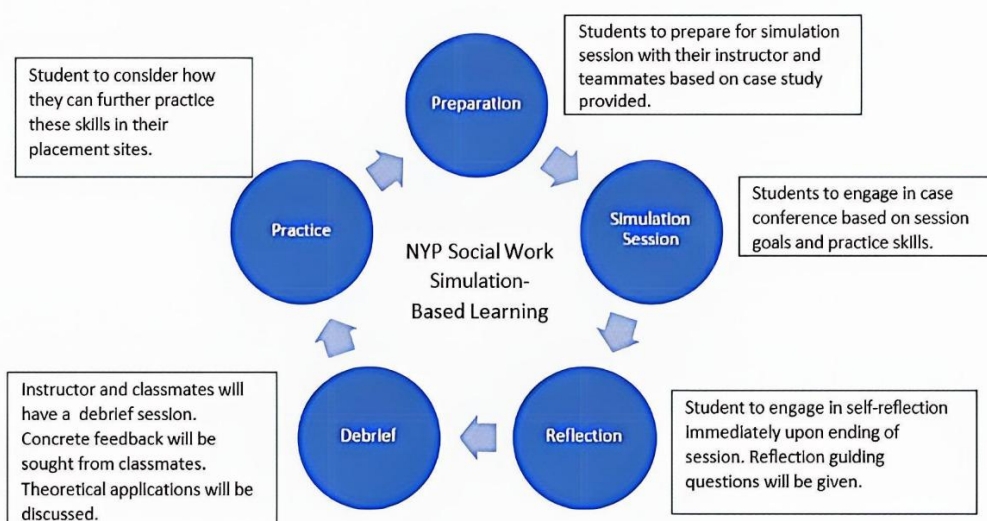


Figure 1. NYP's Social Work Simulation Framework.

3. Materials and Methods

3.1. Participants

The study recruited 43 Year 3 students enrolled in NYP's Diploma in Social Work programme, following rigorous inclusion criteria established by Jefferies et al.^[27] for educational research in social work. Participants were required to have completed foundational social work theory courses, maintained a minimum Grade Point Average (GPA) of 2.5, successfully completed preliminary fieldwork orientation, and had no prior case conference experience. The participant cohort ranged in age from 19 to 25 years, with a gender distribution of 75% female and 25% male. Notably, 15% of participants reported prior volunteer experience in social service settings, providing a baseline of practical exposure.

The research protocol underwent thorough review and received approval from the polytechnic's institutional review board (IRB approval number: SHSS-2024-004). Following Creswell and Plano Clark^[31]'s guidelines for educational research ethics, comprehensive measures were implemented to ensure participant protection. Informed consent was obtained through a two-stage process: initial written consent was secured during recruitment sessions where the study purpose, procedures, risks, and benefits were explained in detail, followed by verbal reconfirmation before each data collection phase. Participants were explicitly informed of their right to withdraw at any time without academic penalty, and

all were provided with contact information for the research team and ethics committee. Data anonymization protocols included the assignment of unique participant codes, secure storage of identifying information separately from research data, and restricted access to identifiable information limited to the principal investigators only.

3.2. Study Design

This study employed a convergent parallel mixed-methods design, where quantitative and qualitative data were collected simultaneously and given equal priority in addressing the research questions. This approach was selected to provide a comprehensive understanding of both the measurable outcomes of the simulation intervention and the underlying processes and experiences that contributed to these outcomes.

3.3. Measures

The study employed a mixed-methods approach, incorporating both quantitative and qualitative data collection strategies^[26]. Three validated assessment tools formed the core measurement framework.

The specific competencies targeted in the simulation-based case conferences were selected based on the MSF partnership consultation and included: (1) multi-agency communication and coordination skills, (2) case assessment and risk evaluation competencies, (3) collaborative decision-making

abilities, (4) professional documentation and reporting skills, and (5) ethical reasoning in complex situations. These competencies were chosen because they represent critical gaps identified by MSF in new graduate preparedness and are essential for effective case conference participation in real-world practice settings.

The Simulation Effectiveness Tool (SET), comprising 20 items measuring simulation realism, engagement, and learning outcomes on a 5-point Likert scale, demonstrated strong reliability with a Cronbach's alpha of 0.89^[29]. This instrument assesses students' perceptions of the simulation's authenticity, their level of engagement during the experience, and their perceived learning gains. The tool has been extensively validated across multiple professional education contexts and has shown consistent reliability across diverse student populations.

The Self-Efficacy in Clinical Skills Scale (SECSS), containing 25 items assessed on a 7-point Likert scale, showed excellent internal consistency reliability of 0.92^[27]. This scale measures students' confidence in their ability to perform various clinical and professional tasks, including client assessment, intervention planning, case documentation, and interprofessional collaboration. The instrument has been specifically validated for use with social work students and has demonstrated sensitivity to changes in self-efficacy following educational interventions.

The Social Work Skills Inventory (SWSI), featuring 30 items on a 5-point behaviourally anchored rating scale, was modified for local context following Corcoran et al.^[28] and maintained high inter-rater reliability of 0.87. This inventory assesses observable professional behaviours and skills, including communication effectiveness, professional demeanour, ethical decision-making, and case management capabilities. The behavioural anchoring provides specific examples of performance at each rating level, enhancing the consistency and accuracy of assessments.

3.4. Data Collection Procedures

Survey responses were systematically screened through multiple validation procedures. The online survey platform (Qualtrics) was configured with forced-response settings to prevent incomplete submissions, and duplicate entries were prevented through unique participant codes linked to student identification numbers. Response quality was assessed through attention check questions embedded within each

survey, and responses showing inconsistent patterns (such as straight-line responding) were flagged for review. Participant eligibility was verified against enrollment records, and only students meeting all inclusion criteria were included in the final analysis.

Interview questions for the qualitative phase were validated through a three-stage expert review process. First, questions were developed based on the research objectives and theoretical framework. Second, a panel of three social work education experts and two MSF practitioners reviewed the questions for content validity, relevance, and clarity. Third, pilot interviews were conducted with five students from a previous cohort to test question comprehensiveness and identify any ambiguities. The final interview guide incorporated feedback from all validation stages to ensure alignment with research objectives and appropriate depth of inquiry.

3.5. Intervention Protocol

The intervention protocol, developed in collaboration with MSF, followed a structured three-phase approach spanning eight weeks, designed to maximise learning whilst ensuring adequate time for skill development and integration (**Table 1**). The preparation phase (2 weeks) encompassed theoretical briefing sessions that provided students with necessary background knowledge about case conference procedures and multi-agency collaboration; role allocation that assigned students to specific professional roles based on their interests and learning needs; scenario distribution that provided detailed case information and background materials; and preliminary group discussions that allowed students to clarify expectations and prepare for their roles.

The implementation phase (4 weeks) consisted of weekly 3-h simulation sessions featuring progressively complex scenarios that built upon previous learning and introduced new challenges. Each session included a 90-min simulation exercise followed by a 90-min structured debriefing session that facilitated reflection and learning consolidation. Video recordings of these sessions enabled detailed analysis and feedback, allowing students to observe their own performance and identify areas for improvement. The scenarios were carefully designed to reflect authentic practice situations whilst providing appropriate challenge levels for student learning.

Table 1. Assessment Timeline.

Time Point	Assessment Type	Purpose
T0 (Baseline)	Pre-training Survey	Establish baseline competency
T1 (Post-simulation)	Immediate feedback	Assess immediate learning
T2 (Post-placement)	Follow-up assessment	Evaluate transfer of training
T3 (3-month follow-up)	Final assessment	Measure sustained impact

The integration phase (2 weeks) focused on consolidating learning and preparing students for real-world application through reflection workshops that encouraged deep thinking about the simulation experiences; peer feedback sessions that provided opportunities for collaborative learning and support; individual coaching that addressed specific learning needs and challenges; and action planning for placement that helped students identify how to apply their learning in field settings.

To ensure intervention fidelity, comprehensive quality control measures were implemented throughout the programme. These included standardised facilitator training that ensured consistent delivery across all sessions; regular calibration sessions that maintained assessment consistency; structured observation protocols that monitored implementation quality; and independent assessment validation that verified the accuracy of performance evaluations. The facilitators underwent intensive training in simulation pedagogy and received ongoing supervision throughout the intervention period to maintain programme quality and consistency.

3.6. Data Collection and Analysis

Data collection employed multiple methods to capture both quantitative and qualitative dimensions of the learning experience, ensuring comprehensive evaluation of the intervention's effectiveness. Quantitative data were gathered through an online survey platform (Qualtrics) that facilitated efficient data collection and management; standardised assessment forms that provided consistent evaluation criteria; performance metrics tracking that monitored student progress over time; and behavioural observation scales that captured observable changes in professional behaviour.

Qualitative data collection included semi-structured interviews that explored students' experiences and perceptions in depth; reflection journals that captured ongoing learning processes and insights; focus group discussions that facilitated peer interaction and collective reflection; and video analysis of simulations that provided a detailed examination

of student performance and interaction patterns. This comprehensive approach enabled triangulation of findings and provided rich insights into the learning process from multiple perspectives.

Participants in the qualitative phase were assigned unique alphanumeric codes (e.g., P001, P002) to maintain anonymity whilst enabling tracking across data collection points. These codes were used consistently when presenting verbatim excerpts in the results and discussion sections. A master coding sheet linking participant identities to codes was stored separately from research data and accessible only to the principal investigators.

The analysis strategy maintained methodological rigour through systematic processing of both quantitative and qualitative data. Quantitative analysis employed paired-samples *t*-tests for pre-post comparisons, with effect sizes calculated using Cohen's *d*. Statistical significance was set at $p < 0.05$, and all analyses were conducted using SPSS version 28. Quantitative analysis encompassed descriptive statistics that summarised participant characteristics and outcome measures; paired *t*-tests for pre-post comparison that assessed the significance of observed changes; effect size calculations that determined the magnitude of intervention effects; and regression analysis to identify predictor variables that influenced learning outcomes. These analyses were conducted using SPSS version 28, with appropriate corrections for multiple comparisons where necessary.

Qualitative data underwent thematic coding using NVivo software, supplemented by content analysis of reflections that identified key themes and patterns; pattern matching that compared findings across different data sources; and cross-case synthesis that examined individual learning trajectories and outcomes. Two independent researchers conducted the initial coding, with disagreements resolved through discussion and consensus. This integrated analytical approach allowed for a comprehensive evaluation of the intervention's effectiveness whilst maintaining sensitivity to individual learning experiences and contextual factors.

4. Results

4.1. Quantitative Findings

The statistical analysis revealed significant improvements across all measured domains, providing strong evidence for the effectiveness of the simulation-based training intervention (**Table 2**). Detailed examination of each domain showed substantial gains that exceeded conventional

thresholds for educational significance. The data analysis process began with comprehensive normality testing using the Shapiro–Wilk test, which confirmed that the data met assumptions for parametric statistical testing. Effect sizes were calculated using Cohen’s *d* to determine the magnitude of observed changes, providing a more nuanced understanding of the intervention’s practical significance beyond statistical significance alone^[27].

Table 2. Pre- and Post-Training Survey Results.

Domain	Pre-Training Mean (Standard Deviation or SD)	Post-Training Mean (SD)	Mean Difference	Effect Size (<i>d</i>)
Confidence and Self-Efficacy	3.2 (0.6)	4.3 (0.5)	+1.1	0.82
Skill Acquisition and Competence	3.4 (0.7)	4.4 (0.4)	+1.0	0.78
Self-Awareness and Mental Resilience	3.1 (0.8)	4.0 (0.6)	+0.9	0.75
Interpersonal and Collaboration Skills	3.3 (0.6)	4.2 (0.5)	+0.9	0.73

Pre-training assessments established baseline competency levels across all measured domains, revealing that students entered the programme with moderate levels of confidence and skill. The confidence and self-efficacy domain showed the most substantial improvement, with mean scores increasing from 3.2 (*SD* = 0.6) to 4.3 (*SD* = 0.5), representing a mean difference of 1.1 points and a large effect size of *d* = 0.82. This improvement suggests that the simulation experience significantly enhanced students’ belief in their ability to perform professional tasks effectively, a finding that aligns with self-efficacy theory and previous research on simulation-based learning^[22].

Skill acquisition and competence demonstrated similarly impressive gains, with scores rising from 3.4 (*SD* = 0.7) to 4.4 (*SD* = 0.4), yielding a mean difference of 1.0 and an effect size of *d* = 0.78. This large effect size indicates that students developed substantial practical competencies through the simulation experience, moving from moderate to high levels of skill demonstration. The reduction in standard deviation from pre- to post-training suggests that the intervention not only improved average performance but also reduced variability among students, indicating more consistent skill development across the cohort.

Self-awareness and mental resilience showed meaningful improvement from 3.1 (*SD* = 0.8) to 4.0 (*SD* = 0.6), with a mean difference of 0.9 and an effect size of *d* = 0.75. This domain encompasses students’ ability to recognise their own strengths and limitations, manage stress effectively, and maintain professional composure in challenging situations.

The substantial improvement in this area suggests that the simulation experience contributed to important aspects of professional development beyond technical skills.

Interpersonal and collaboration skills increased from 3.3 (*SD* = 0.6) to 4.2 (*SD* = 0.5), representing a mean difference of 0.9 and an effect size of *d* = 0.73. This improvement is particularly significant given the emphasis on multi-agency collaboration in contemporary social work practice. The enhanced scores suggest that students developed greater competence in working with diverse stakeholders, communicating effectively across professional boundaries, and contributing to collaborative decision-making processes.

Additional analyses examined the relationship between baseline characteristics and learning outcomes. Students with prior volunteer experience showed slightly higher baseline scores but demonstrated similar improvement patterns to their peers, suggesting that the intervention was effective regardless of previous exposure to social service settings. Age and gender did not significantly predict learning outcomes, indicating that the simulation approach was equally effective across demographic groups.

Correlation analyses revealed significant positive relationships between improvements in different domains, suggesting that the intervention produced holistic development rather than isolated skill gains. The strongest correlation was observed between confidence and skill acquisition (*r* = 0.67, *p* < 0.001), supporting theoretical models that link self-efficacy beliefs with performance outcomes. Similarly, improvements in self-awareness correlated significantly with

enhanced interpersonal skills ($r = 0.58, p < 0.01$), suggesting that personal insight contributes to more effective professional relationships.

The statistical analysis revealed significant improvements across all measured domains ($p < 0.05$). Detailed examination of each domain showed:

4.2. Qualitative Findings

The qualitative analysis revealed rich insights into students' experiences and perceptions of the simulation-based training, providing depth and context to the quantitative findings. Thematic analysis of interview transcripts, reflection journals, and focus group discussions identified five major themes that captured the essence of students' learning experiences

and the mechanisms through which the intervention produced its effects (**Table 3**).

Enhanced professional confidence emerged as the most prominent theme, with students consistently reporting increased readiness for real-world scenarios following the simulation experience. Representative quotes included "I feel much more prepared to handle actual case conferences now" and "The simulation gave me confidence that I can contribute meaningfully to professional discussions." Students described how the opportunity to practice in a safe environment allowed them to develop confidence gradually, building on successful experiences and learning from mistakes without real-world consequences. This finding aligns with self-efficacy theory and supports quantitative results showing substantial improvements in confidence measures.

Table 3. Thematic Analysis of Qualitative Feedback.

Theme	Key Findings	Representative Quote
Enhanced Professional Confidence	Increased readiness for real-world scenarios	"I feel much more prepared to handle actual case conferences now."
Practical Skill Development	Improved facilitation and documentation skills	"The simulation helped me understand the practical aspects of case management."
Interagency Collaboration	Better understanding of stakeholder roles	"I now appreciate the complexity of multi-agency coordination."
Professional Identity Formation	Stronger sense of professional role	"The experience helped me understand my role as a social worker better."
Learning Environment Benefits	Value of safe practice space	"Being able to make mistakes and learn from them was invaluable."

Practical skill development constituted another major theme, with students highlighting improved facilitation and documentation skills as key outcomes of the training. Comments such as "The simulation helped me understand the practical aspects of case management" and "I learned how to structure discussions and keep meetings focused" illustrated students' recognition of concrete skill gains. Students particularly valued the opportunity to practice specific techniques such as summarising complex information, asking clarifying questions, and managing group dynamics. The authentic nature of the scenarios, developed in partnership with MSF, appeared to be crucial in facilitating this practical learning.

Interagency collaboration understanding represented a significant area of learning, with students developing a better appreciation of stakeholder roles and the complexity of multi-agency coordination. Students reported insights such as "I now appreciate the complexity of multi-agency coordination" and "Understanding different professional perspectives has made me a better team member." The simulation experience

exposed students to the challenges of working across professional boundaries, managing competing priorities, and finding common ground among diverse stakeholders. This learning appeared to be particularly valuable given the increasingly collaborative nature of contemporary social work practice.

Professional identity formation emerged as an important but somewhat unexpected outcome of the simulation experience. Students described developing a stronger sense of their professional role and responsibilities, with comments such as "The experience helped me understand my role as a social worker better" and "I feel more like a professional now, not just a student." This identity development appeared to be facilitated by the opportunity to assume professional roles in realistic contexts, receive feedback from experienced practitioners, and reflect on their experiences with peers and supervisors.

Learning environment benefits constituted the final major theme, with students consistently valuing the safe practice

space provided by the simulation. Representative quotes included “Being able to make mistakes and learn from them was invaluable” and “The supportive environment made it easier to take risks and try new approaches.” Students appreciated the combination of challenge and support provided by the simulation environment, which allowed them to stretch their capabilities whilst receiving guidance and feedback. The structured debriefing sessions were particularly valued as opportunities for reflection and learning consolidation.

Cross-case analysis revealed interesting patterns in individual learning trajectories. Students who initially expressed high levels of anxiety about the simulation experience often showed the greatest gains in confidence and self-efficacy, suggesting that the intervention was particularly beneficial for those who most needed confidence-building. Conversely, students who entered with higher baseline confidence tended to show greater gains in technical skills and professional insight, indicating that the simulation provided appropriate challenges for learners at different starting points.

The analysis also revealed the importance of peer learning and support in the simulation experience. Students frequently mentioned learning from observing their peers, receiving feedback from classmates, and engaging in collaborative reflection. This finding suggests that the group-based nature of the simulation contributed significantly to its effectiveness, creating opportunities for social learning and mutual support that enhanced individual development.

4.3. Integration of Quantitative and Qualitative Findings

The convergence of quantitative and qualitative findings provides robust evidence for the effectiveness of the simulation-based training intervention. The substantial effect sizes observed in the quantitative analysis are supported and explained by the rich qualitative data, which illuminate the mechanisms through which the intervention produced its effects. Students’ reports of enhanced confidence align directly with the large effect size observed in the confidence and self-efficacy domain, whilst their descriptions of practical skill development correspond to the improvements measured in the skill acquisition domain.

The qualitative findings also provide important insights into the sustainability and transferability of learning gains. Students’ reports of feeling better prepared for real-world

practice suggest that the simulation experience successfully bridged the gap between classroom learning and professional application. Their enhanced understanding of professional roles and responsibilities indicates that the intervention contributed to important aspects of professional socialisation that extend beyond specific technical skills.

5. Discussion

The findings from this study provide compelling evidence for the effectiveness of simulation-based training in social work education, contributing to a growing body of research that supports experiential learning approaches in professional preparation. The significant improvements observed across all measured domains suggest that this pedagogical approach successfully bridges the gap between theoretical knowledge and practical application, addressing a persistent challenge in social work education that has been documented extensively in the literature^[2,15].

5.1. Theoretical Implications

The substantial increase in students’ confidence and self-efficacy, with mean scores rising from 3.2 to 4.3 and representing a large effect size of $d = 0.82$, provides strong support for social cognitive theory’s predictions about the relationship between mastery experiences and self-efficacy development^[10,11]. This finding is particularly significant because self-efficacy beliefs have been consistently linked to professional performance and career persistence in social work^[22]. The simulation experience appears to have provided students with the type of mastery experiences that Bandura identified as the most powerful source of self-efficacy beliefs, allowing them to successfully perform professional tasks in a supportive environment.

The improvements in skill acquisition and competence, with an effect size of $d = 0.78$, align with experiential learning theory’s emphasis on learning through direct experience and reflection^[7,8]. The structured nature of the simulation programme, which included preparation, implementation, and integration phases, mirrors Kolb’s learning cycle and appears to have facilitated the type of deep learning that occurs when students actively engage with authentic professional challenges. The reduction in variability among students from pre- to post-training suggests that the simulation approach

was effective in bringing all students to a higher level of competence, regardless of their starting point.

The development of self-awareness and mental resilience, with an effect size of $d = 0.75$, supports constructivist learning theory's emphasis on the active construction of knowledge through meaningful experiences^[14]. The simulation environment appears to have provided students with opportunities to develop metacognitive awareness of their own learning processes and professional development needs. This finding is particularly important given the emotional demands of social work practice and the need for practitioners to develop effective coping strategies and professional resilience^[16].

5.2. Practical Implications for Social Work Education

The findings have significant practical applications for social work education programmes seeking to enhance their effectiveness in preparing students for contemporary practice demands. The demonstrated effectiveness of simulation-based training suggests that educational institutions should consider systematic integration of these approaches throughout their curricula, not merely as supplementary activities but as core pedagogical strategies. The partnership model with MSF provides a replicable framework for other institutions, demonstrating how collaboration between educational providers and practice agencies can create mutually beneficial outcomes that enhance both educational quality and practice relevance.

The improvement in interpersonal and collaboration skills, with an effect size of $d = 0.73$, is particularly relevant given the increasingly collaborative nature of contemporary social work practice. The simulation experience appears to have effectively prepared students for the complex interprofessional dynamics they will encounter in practice settings. This finding suggests that simulation-based training should be considered an essential component of preparation for collaborative practice, complementing traditional classroom instruction with opportunities for experiential learning^[20].

The qualitative findings provide additional insights into the mechanisms through which simulation produces its effects. Students' reports of enhanced professional confidence align with quantitative measures and suggest that the safe learning environment provided by simulation allows students

to develop confidence gradually through successful experiences. The emphasis on practical skill development in student reflections indicates that the authentic nature of the scenarios, developed in partnership with MSF, was crucial in facilitating meaningful learning that students perceived as relevant to their future practice.

The pragmatic implications of this research extend beyond individual skill development to broader considerations of workforce preparation and professional competence. The significant improvements in multi-agency collaboration skills directly address industry concerns about graduate readiness for complex practice environments. The MSF partnership model demonstrates how educational institutions can align their training programmes with employer expectations whilst maintaining academic rigour and pedagogical effectiveness.

5.3. Partnership Models and Industry Collaboration

The success of the MSF partnership in this study provides a valuable model for other educational institutions seeking to enhance their simulation programmes. The collaboration ensured that simulation scenarios reflected current practice realities and addressed the competencies most valued by employers, whilst also providing students with exposure to the expectations and standards of professional practice^[15]. This type of partnership appears to be particularly valuable in professional education, where the gap between academic learning and practice demands can be substantial.

The partnership model also demonstrates the mutual benefits that can arise from industry-academia collaboration. MSF gained opportunities to influence the preparation of future practitioners and to identify promising students for potential employment, whilst the educational institution gained access to current practice expertise and authentic case materials. This reciprocal relationship appears to be sustainable and could serve as a model for similar collaborations in other contexts^[8].

The development of professional identity through simulation, as revealed in the qualitative analysis, appears to be facilitated by exposure to authentic professional contexts and interaction with experienced practitioners. Students' reports of feeling "more like a professional" following the simulation experience suggest that this type of training contributes

to important aspects of professional socialisation that extend beyond specific technical skills. This finding has implications for the timing and structure of simulation experiences within social work curricula, suggesting that they should be positioned to support professional identity development as well as skill acquisition.

5.4. Methodological Contributions

The study's mixed-methods approach provides a model for comprehensive evaluation of educational interventions in social work. The combination of validated quantitative measures with rich qualitative data allowed for both the measurement of specific outcomes and understanding of the processes through which those outcomes were achieved. The use of multiple assessment points enabled tracking of both immediate learning outcomes and longer-term skill retention, providing valuable insights into the sustainability of learning gains.

The adaptation of existing assessment tools for the local context, following Corcoran et al.^[28], demonstrates the importance of cultural and contextual sensitivity in educational research. The maintenance of high reliability coefficients whilst adapting instruments for local use suggests that this approach can be successfully replicated in other contexts. The development of comprehensive assessment frameworks that capture the multidimensional nature of professional competence represents an important contribution to the field of social work education research.

6. Limitations and Areas for Future Research

Several limitations of the current study suggest directions for future research. The relatively small sample size of 43 students, whilst adequate for the analyses conducted, limits the generalisability of findings to other populations and contexts. Future research should examine the effectiveness of simulation-based training with larger and more diverse student populations to establish the broader applicability of these findings.

The absence of a control group in the current study, whilst understandable from an ethical perspective given the educational context, limits the ability to attribute observed improvements definitively to the simulation intervention. Fu-

ture researchers should consider randomised controlled trial designs where feasible, or at least comparison with alternative educational approaches, to strengthen causal inferences about the effectiveness of simulation-based training. Additionally, increasing sample sizes and incorporating multiple comparison groups would enhance the robustness of findings and enable more sophisticated statistical analyses.

The focus on immediate and short-term outcomes in this study leaves questions about the long-term impact of simulation training on professional practice. Longitudinal studies tracking graduates into their professional careers would provide valuable insights into whether the benefits observed in educational settings translate into improved practice outcomes and career success. Such research would also illuminate the sustainability of learning gains over time and the factors that support or hinder the transfer of simulation-based learning to practice settings.

The study's focus on case conference skills, whilst important, represents only one aspect of social work practice. Future research should examine the effectiveness of simulation-based training for other critical areas of practice, such as crisis intervention, family therapy, and community development. This broader examination would help establish the scope of simulation's applicability in social work education and identify areas where it may be most and least effective.

7. Implications for Professional Development

The findings suggest that simulation-based training should be considered not only as a pre-service educational tool but also as a method for continuing professional development. The effectiveness of the approach in developing confidence, skills, and professional identity suggests that it could be valuable for experienced practitioners seeking to develop new competencies or refresh existing skills. This application would be particularly relevant for practitioners transitioning to new roles or working with new client populations.

The partnership model demonstrated in this study could also be extended to support ongoing professional development through collaboration between employers and educational institutions. Such partnerships could provide practi-

tioners with opportunities for skill development whilst also contributing to the preparation of future professionals. This type of collaboration could help address the ongoing professional development needs of the social work workforce whilst also enhancing the quality of pre-service education.

8. Conclusions

This study provides robust evidence for the effectiveness of simulation-based training in social work education, demonstrating significant improvements in student confidence, skills, and professional development. The partnership with MSF proved crucial in ensuring the authenticity and relevance of training scenarios, whilst the comprehensive evaluation approach provided insights into both outcomes and processes. The findings support the integration of simulation-based learning into social work curricula and highlight the value of industry-academia partnerships in professional education.

The theoretical contributions of this research extend our understanding of how experiential learning principles can be effectively applied in social work education. The substantial effect sizes observed across all measured domains provide strong empirical support for simulation-based approaches, whilst the qualitative findings illuminate the mechanisms through which these approaches produce their effects. The development of professional identity, enhancement of self-efficacy, and improvement in practical skills represent interconnected outcomes that collectively contribute to more effective preparation for professional practice.

The practical implications of these findings are significant for social work education programmes seeking to enhance their effectiveness in preparing students for contemporary practice demands. The success of the partnership model with MSF demonstrates that collaboration between educational institutions and practice agencies can produce mutually beneficial outcomes that enhance both educational quality and practice relevance. Such partnerships ensure that educational programmes remain responsive to evolving practice demands whilst providing agencies with opportunities to influence the preparation of future practitioners.

The methodological approach employed in this study provides a model for the comprehensive evaluation of educational innovations in social work. The integration of

quantitative and qualitative methods, combined with longitudinal data collection, enabled both the measurement of specific outcomes and the understanding of the processes underlying those outcomes. This approach could be adapted for the evaluation of other educational interventions and contributes to the development of evidence-based practices in social work education.

Future research should examine the long-term impact of simulation-based training on professional practice outcomes, explore applications to other areas of social work practice, and investigate the optimal design and implementation of simulation programmes. Longitudinal studies tracking graduates into their professional careers would provide valuable insights into the sustainability and transferability of learning gains, whilst comparative studies could identify the most effective approaches to simulation-based education. Additionally, research examining the cost-effectiveness of simulation programmes and their scalability across different educational contexts would inform broader implementation decisions.

The evidence presented in this study suggests that simulation-based training represents a valuable addition to the pedagogical toolkit available to social work educators. When implemented thoughtfully and in partnership with practice agencies, such approaches can significantly enhance student preparation for professional practice whilst contributing to the development of a more competent and confident social work workforce. As the profession continues to evolve in response to changing social needs and practice contexts, educational approaches that effectively bridge theory and practice will become increasingly important in ensuring that social workers are adequately prepared for the challenges they will face in their professional careers.

Author Contributions

Conceptualization, D.W. and V.V.; methodology, V.V.; validation, V.V. and D.W.; formal analysis, V.V.; investigation, V.V. and D.W.; resources, D.W.; data curation, D.W.; writing—original draft preparation, V.V.; writing—review and editing, D.W. and V.V.; visualization, V.V.; supervision, D.W.; project administration, D.W. Both authors have read and agreed to the published version of the manuscript.

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Informed Consent Statement

All participants provided informed consent prior to participating in the study.

Data Availability Statement

The data used in this study are available from the corresponding author upon reasonable request.

Conflicts of Interest

The authors declare no conflict of interest.

AI Use Statement

During the preparation of this work, the authors used Pair, which is a large language model-powered assistant for government officers that allows safe and productive use of large language models within government systems. It is designed to assist public officers in Singapore with tasks such as writing, research, and thereby enhancing productivity and improving public service. After using this tool/service, the authors reviewed and edited the content as needed and take full responsibility for the content of the published article.

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