

Supplementary Table S1. Demographic and Occupational Characteristics of Study Participants (n = 28)

No.	Role	Age	Marital Status	Field of Study	Education Level	Employment Status	Work Experience as Health Care Provider
1	Health care provider	41	Married	Midwifery	Bachelor	Permanent	6 months
2	Health care provider	41	Married	Midwifery	Bachelor	Permanent	18 years
3	Health care provider	38	Married	Midwifery	Bachelor	Permanent	18 years
4	Health care provider	52	Single	Midwifery	Bachelor	Permanent	25 years
5	Health care provider	54	Married	Midwifery	Bachelor	Permanent	26 years
6	Health care provider	30	Single	Midwifery	Bachelor	Contract	1 year 6 months
7	Health care provider	25	Single	Family Health	Bachelor	Contract	1 year 1 month
8	Health care provider	24	Single	Family Health	Associate	Contract	3 years
9	Health care provider	29	Single	Midwifery	Bachelor	Contract	2 years
10	Health care provider	36	Married	Midwifery	Associate	Contract	12 years
11	Health care provider	26	Single	Public Health	Associate	Contract	3 years
12	Health care provider	29	Married	Family Health	Associate	Contract	6 years
13	Health care provider	26	Married	Public Health	Associate	Contract	7 months
14	Health care provider	40	Married	Midwifery	Bachelor	Contract	11 years
15	Health care provider	49	Single	Family Health	Bachelor	Contract	6 years 5 months
16	Health care provider	42	Married	Midwifery	Associate	Contract	5 years
17	Health care provider	35	Married	Family Health	Associate	Contract	9 years
18	Health care provider	35	Married	Family Health	Bachelor	Contract	8 years
19	Health care provider	29	Single	Midwifery	Bachelor	Contract	2 years 9 months
20	Health care provider	24	Single	Family Health	Associate	Contract	8 months
21	Health care provider	32	Married	Public Health	Bachelor	Company-based	7 years

22	Health care provider	41	Married	Midwifery	Bachelor	Company-based	9 years
23	Health care provider	35	Single	Midwifery	Bachelor	Company-based	16 years
24	Health care provider	24	Single	Family Health	Associate	Contract	6 months
25	Family physician	36	Married	Medicine	Doctorate	Contract	6 years
26	Family physician	33	Married	Medicine	Doctorate	Contract	4 years
27	Center supervisor	55	Married	Midwifery	Associate	Permanent	26 years
28	Center supervisor	40	Married	Midwifery	Master's	Permanent	12 years

Supplementary Table S2. Challenges to HCPs Empowerment – First Cycle

Category	Subcategory	Code
Inadequacy of the Health Care Provider Training Process	Insufficient professional knowledge	- Lack of occupational knowledge - Deficiency in updating and receiving professional education
	Need for improvement in learning and performance	- Desire to enhance job performance - Need to review and update learned materials - Unsystematic searching for job-related information - Relying on peer learning for professional knowledge - Inconsistency between rapid changes in care guidelines and training programs - Insufficient communication skills training - Lack of clear job descriptions in pre-service education
	Lack of educational readiness	- Inadequate preparation for assuming the role of health care provider - Insufficient time for training on the SIB electronic system - Inadequate skill training for performing substitute duties - Limited scientific readiness and specialized knowledge - Poor knowledge in applying protocols and official instructions - Absence of educational needs assessment in training programs

	Poor quality of in-service training	- Low quality of retraining programs - Inappropriate content in training courses - Use of traditional teaching methods - Inconvenient scheduling of courses - Excessive length of training sessions - Insufficient instructional competence among course trainers - Lack of coordination between client education by providers and specialists - Theory–practice gap in service delivery - Gap between academic education and professional expectations
Ineffective Management of Organizational Resources	Inadequate resources and facilities	- Insufficient equipment and facilities - Poor management of physical environment and resources - Unequal distribution of equipment and materials - Use of defective tools and instruments - Non-standard physical workspace
	Human resource management issues	- Workforce shortage - Inappropriate staff allocation - Employment of personnel with irrelevant specialties - Inadequate performance evaluation indicators - Poor feedback in performance appraisal - Overemphasis by managers on documentation rather than actual performance
Weakness in Professional Performance	Workload and role challenges	- Excessively broad job descriptions - Imbalanced workload - Unrealistic expectations beyond defined duties - Overcrowded center and high client influx - Wide diversity of client health needs and ages
	Deficiency in job commitment and service provision	- Negligence in completing assigned duties - Low job commitment - Poor follow-up and client guidance - Weak teamwork participation - Lack of familiarity with effective client education methods - Inadequate health education for clients - Underestimation of the value of documentation - Irregular reporting of client education activities

	Motivation and support-related barriers	- Lack of transparency in payment system - Need for motivation and morale enhancement - Limited recreational and welfare facilities - Unfair distribution of salaries and benefits - Job instability - Lack of interest in participating in training sessions - Shortage of performance-based and financial incentives - Inadequate organizational support in fulfilling expected duties
	Communication problems	- Poor interpersonal communication between staff - Weak inter-professional communication - Limited communication skills with clients - Unequal interactions between supervisors and providers - Inefficient information transfer to management

Supplementary Table S3. Qualitative Analysis of Empowerment Program

Category	Subcategory	Code
Enhancement of Scientific and Practical Empowerment	Review of professional learning	- Reviewing previously learned job related knowledge - Enhancing professional knowledge
	Improvement of specialized knowledge and skills	- Increasing job-related information - Practical relevance of educational session content - Learning modern teaching methods - Modeling from experienced and effective instructors - Facilitating experience sharing through virtual platforms
	Strengthening practical competencies	- Applying learned materials in practice - Facilitating information exchange with colleagues - Accuracy in documenting activities - Improving ability to search online resources

Promotion of Supportive Workplace Culture	Development of interpersonal relationships	- Observing mutual respect - Enhancing communication skills - Improving effective interaction among colleagues
	Improvement of institutional collaboration	- Increasing accountability - Encouraging assertiveness in expressing opinions - Improving workplace atmosphere - Expanding professional support
	Strengthening teamwork and participation	- Adequacy in staff performance monitoring - Providing necessary equipment and resources - Active participation in brainstorming and reflection sessions - Reinforcing teamwork - Increasing involvement in educational planning - Improving collaboration in the workplace
Improvement of Psychological Well-being	Mental and emotional balance	- Attaining inner satisfaction - Achieving a sense of calmness
	Emotional growth and motivation	- Fostering gratitude and appreciation - Reducing occupational stress - Developing goal orientation - Building self-confidence and optimism - Strengthening self-belief and enthusiasm for learning - Enhancing motivation in learning activities - Feeling contentment from recognition and appreciation