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COMPETENCIES OF ACCREDITED SOCIAL HEALTH ACTIVISTS REGARDING BIRTH PREPAREDNESS AND COMPLICATION READINESS

TIWARI AP[1*], SHARMA A[2] AND VATI J[3]

1: Associate Professor, Manikaka Topawala Institute of Nursing, Charotar University of Science and Technology, India

2: Professor, Manikaka Topawala Institute of Nursing, Charotar University of Science and Technology, India

3: Sri Guru Harkrishan Sahib College of Nursing, Punjab, India

[*]**Corresponding Author: Dr. Anjali Pushkar Tiwari; E Mail: anjalitiwari.nur@charusat.ac.in**

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ABSTRACT

The purpose of current study is to determine the competencies of Accredited Social Health Activists (ASHA) regarding Birth Preparedness and Complication Readiness (BPCR), in terms of their knowledge and skills in delivering them. The study employed a cross-sectional design done on 95 ASHAs of a populous district of Gujarat, India. A Competency Assessment Tool having two parts, viz., Structured Knowledge Questionnaire and an Observational Checklist, were used for data collection. The study results found that only 1.1% of the participants had received more than 4 rounds of training regarding BPCR during their entire years of experience. Additionally, 28.42% had adequately good levels of knowledge whereas a huge segment 69.47% had a moderately satisfactory level of knowledge regarding BPCR. A major portion of the participant, 84.21% demonstrated poor skills in delivering BPCR. A positive correlation existed between the knowledge and skill scores of the participants. Although a notable majority of ASHAs demonstrated some understanding regarding BPCR, however their ability to translate this knowledge into effective skills remained severely lacking. This highlights an urgent need for targeted interventions at district and facility levels which could improve their practical skills regarding Birth Preparedness and Complication Readiness.

The study highlights potential areas for the capacity-building training, emphasizing the need of proactive health measures in reducing the mortality and morbidity in expectant population, especially of a low-resource setting.

Keywords: Birth Preparedness and Complication Readiness, Accredited Social Health Activist, Knowledge, Skill, Competency

INTRODUCTION:

Giving birth to a new life is nothing less than a miracle wrapped in normalcy. Childbirth, is a crucial health event, which most women aspire to experience in their lives. It is an event filled with happiness, satisfaction and fulfillment for women. This beautiful psychological phenomenon, often accompanies the not so happy happenings raised due to the pregnancy and birth related complications. These complications could range from anything like an infection to delayed progress of labor to the unimaginable, excessive blood loss, leading to lifelong morbidity or sadly even mortality, which can either affect the parturient or the unborn child or even both. As per National Health Mission (2024), India's Maternal Mortality Ratio (MMR) has significantly improved from 130 in 2014-16 to 97 per lakh live births in 2018-20 **[1]**. Despite the commendable consistent fall in the MMR of India, still almost 24000 maternal deaths continue to take place in one year alone **[2]**. This accounts for approximately more than 65 deaths per day due to maternal causes. There are various measures or steps with which the number of these fatalities could be brought down. One such measure includes Birth Preparedness and Complication Readiness (BPCR) **[3]**.

BPCR is a crucial strategy that significantly strengthens the ability of expectant mothers, their families as well as health care professionals to ensure appropriate management for an uneventful labor, resulting in a healthy mother and newborn **[4]**. It is a pivotal element of antenatal care, intended to prepare the expectant women and their families for normal childbirth through timely skilled care and additionally, also prepares them in advance for any emergencies or complications, if any arises during the course of childbirth **[5]**. Some of the components of BPCR plan as per World Health Organization (2022), includes: identification of the desired place of birth, the preferred birth attendant and their contact details, a birth companion, compatible blood donors in case of emergency along with arranging for various elements like transportation to the health facility for birth or in case of an emergency, funds for birth-related and emergency expenses, supplies for childbirth, such as clean clothes to dry and

wrap the newborn **[6]**. This strategy helps the antenatal woman and family to have a relaxed sense of control and also an efficient decision making ability as beforehand itself they are well prepared for any childbirth related situation, hence helping in bringing down the MMR.

In India, when it comes to maternal health care, BPCR is not paid much attention to, although it is one of the most cost-effective strategy **[7]**. In order to decrease the pregnancy and childbirth related fatalities even further, the Government of India are proactively been involved in taking various health-care related steps. Few of these efforts as stated by Ministry of Women and Child Development, India (2020) includes implementation of various maternal and child health related programs/schemes, special provisions in tribal areas to promote maternal health, implementation of Maternal Death Surveillance and Response (MDSR) which primarily focusses on preventing maternal deaths, provision of funds for strengthening comprehensive Reproductive, Maternal and New Born health services, setting-out more than one million Accredited Social Health Activists (ASHAs) at grassroots level to promote the utilization and access to healthcare services by the expecting mother and many more such significant ones **[8]**. ASHAs are one of the key stakeholders who play a vital part in bringing down the MMR. ASHAs serve as a facilitator, mobilizer and provider of community level care **[9]**. Under various government programs or schemes that strive to promote institutional deliveries, ASHAs are significantly instrumental in raising awareness and promoting positive utilization of health care facilities, especially among underprivileged and economically disadvantaged populations. In the Guidelines for ASHAs by the National Health Mission (2022), the reason ASHAs are focused on more while dissipating health care measures in these populations is because the selection of ASHAs ensure the adequate representation of the disadvantaged population groups **[10]**. ASHAs play a vital role especially at peripheral levels such as sensitizing and counseling women about birth preparedness and safe delivery, engaging pregnant women with local health facilities and increasing utilization of the existing health services, which overall leads to uneventful and fruitful pregnancy outcome **[11]**. Community mobilization through stakeholders like ASHAs and through participatory women's group may enhance the birth outcomes among the underprivileged populations **[12]**. Studies also suggest that in spite of the colossal efforts taken to improve the status of BPCR, its

prevalence is still low and not up to the expected levels in India **[7, 13]**. Thus in order to achieve high levels of BPCR, strengthening the present taskforce like community health workers or ASHAs must be considered as a strategic approach. And hence the investigator with this view, assessed the competencies of ASHAs regarding BPCR as first step towards better BPCR.

MATERIALS AND METHODS:

Study Design and Participants: The present study was focused on assessing the competencies, in terms of knowledge and skills of ASHAs regarding BPCR. To comprehensively assess the existing competencies of ASHAs, this study adopted a cross-sectional design. The target population consisted of ASHAs of government health care institutions of one of the populous district of Gujarat, India. ASHAs who were working for at least 6 months and were consenting their participation were included in the study. Considering the standard normal deviate (1.96) that corresponds to 95% confidence level and assuming based on previous study that 4.8% of ASHAs had knowledge about an important component of BPCR **[11]**; with a 10% non-response rate, the sample size calculated was 77. The researchers decided and rounded up the final sample size as 95. A multi-stage sampling techniques was used to recruit the 95 ASHAs. This was achieved by conveniently selecting Anand district from all the districts of Gujarat state. Following which, out of the 8 talukas of this district, one taluka was selected through simple random sampling using lottery method. From here, five Government health care institutions were selected conveniently, which included three Community Health Centers and two Primary Health Centers. Ninety five ASHAs who met the selection criteria were then recruited conveniently.

Data Collection Tools: The tool used for data collection consisted of two sections: section I was of details related to Bio-Demographic variables of the ASHAs like age, education, marital status, duration of working as ASHA and rounds of training received till the time of data collection; whereas section II of the tool was a researcher developed Competency Assessment Tool (CAT). These tools were prepared after thorough literature review and even after considering and adapting the Johns Hopkins Program for International Education in Gynecology and Obstetrics' tools to monitor BPCR **[14]**. As the researcher was assessing competencies of ASHAs in terms of their knowledge and skills, this CAT constituted of two parts. Part I was a structured knowledge questionnaire which included 14 items regarding the various

components of BPCR; whereas part II of CAT was an observational checklist in order to assess the skills in delivering BPCR, which included 26 items. This entire tool was validated by 16 experts from the field of Maternal and Child health care. The reliability of part I of the tool was calculated using Split Half reliability with Spearman Brown correction and was found to be 0.82. Whereas an inter-rater correlation coefficient (percentage agreement for two raters) was used to establish the reliability of part II of the tool. This was done by two trained raters/observers from nursing background who were voluntarily enrolled to observe the skills of a group of 15 ASHAs regarding BPCR. These raters/observers were explained about the objective of the study and the variable that had to be observed. Practice sessions were also conducted for the raters/observers, wherein their doubts and difficulties were cleared by the researcher. The inter-rater reliability was calculated to be 98% (0.98) which represented an excellent agreement.

Data Collection Procedure: The data were collected after obtaining the ethical clearance from the Institutional Ethics Committee – Human Research (IEC-HR) of Charotar University of Science and Technology (CHARUSAT). Permission was also acquired from the Chief District Health Officer (CDHO), Anand district, Gujarat, India and Additional Director, Health, Gujarat, India for conducting this study among the ASHAs of the research settings. During the monthly meetings of ASHAs, their informed consent were obtained after explaining them the purpose of study as well as their right for voluntary participation. Complete confidentiality was maintained throughout the data collection process which lasted for approximately five months. The ASHAs firstly filled the bio-demographic form (section I) and then the part I of the CAT (knowledge questionnaire). The researcher accompanied the ASHAs during their antenatal home visit and observed their skills while delivering BPCR through the part II of the CAT (observational checklist). After completion of data collection, the data collected were tabulated and analyzed.

Data Analysis: The data were analyzed in terms of objectives of the study using descriptive and inferential statistics. The data sheet was prepared by the researcher and data analysis was done by a Biostatistician using Statistical Package for Social Science (Version 22). Descriptive statistics (frequency and percentage distributions) were used to describe the participants according to their bio-demographic variables, their competency

levels in terms of their knowledge and skills. Additionally Inferential statistics was used to determine the association related findings, with the statistical significance accepted as $p < 0.05$.

Ethical Considerations: Ethical approval was acquired from the IEC-HR of CHARUSAT as well as written permission was obtained from the CDHO and the Additional Director, Health, Gujarat before conducting the research. Written informed consents were obtained before data collection, from the eligible ASHAs. Throughout the study, complete confidentiality was ensured. All the data collected was appropriately and securely coded by the researcher. The data and results of the competency scores of AHSAs were not disclosed to their higher authorities.

RESULTS:

Socio-demographic characteristics: 48.4% of the ASHAs belonged to the age group of 30 - 39 years. All of the AHSAs were married. 53.7% of them had passed their 10th standard education whereas 34.7% were working as ASHA for a duration between 25-36 months. 38.9% of ASHAs had received only one round of training and only 1.1% ASHA who had received more than 4 rounds of training.

Findings related to competencies of ASHAs regarding BPCR: As the researchers operationally considered competency in terms of knowledge and skill, the analysis was also done in assessing the level of knowledge and skills of ASHAs regarding BPCR. Although a very minimal number of ASHAs possessed poor level of knowledge, however a majority of them were having only satisfactory levels of knowledge. **Table 1** shows the findings about the knowledge level of the ASHAs regarding BPCR.

Table 1: Distribution of participants according to knowledge of all components of BPCR (n=95)

Level	Frequency (n)	Percentage (%)
Good (adequate) level of knowledge	27	28.42
Satisfactory (moderate) level of knowledge	66	69.47
Poor (inadequate) level of knowledge	2	2.10

As far as the skill scores of ASHAs regarding BPCR was concerned, 15.78 % of ASHAs had good skills while 84.21 % had poor skills regarding BPCR. Adapting the Safe Motherhood Clinical skill assessment tool (JHPIEGO, 2004) for skill score assessment, a participant was considered having good skill if she demonstrated above 80% of the skills correctly, whereas for demonstrating below 20% of skills correctly were considered as poor skills.

Findings related to association between competencies (knowledge and skills) of ASHAs regarding BPCR and their socio-

demographic variables: All the socio-demographic variables of ASHAs, considered in this study, in relation with their knowledge scores were found to be independent of each other with all p values > 0.05. Chi square test was employed to determine the association. Hence no association was found between the levels of knowledge of ASHAs with their socio-demographic variables. Similarly, the variable highest level of education completed in relation with skill scores of ASHA were independent of each other (p value = 0.805) whereas the variables age with calculated χ^2 = 16.419, Duration of working as ASHA with calculated χ^2 = 20.851 and Rounds of training received with calculated χ^2 = 33.968 showed an association with skill scores at 0.05 level of significance (all p values <0.05).

Findings related to association between knowledge and skills of ASHAs regarding BPCR: The study findings suggested that a positive correlation existed between the knowledge and skill scores regarding BPCR of ASHAs. Since the data was not normally distributed, Spearman's rho correlation test was employed to determine this association. The value of Spearman's rho correlation R is 0.662 **(Table 2)**.

Table 2: Spearman's rho Correlation test

Level	Skill score	Knowledge score
Correlation Coefficient	1.000	.662
Sig. (2-tailed)		<0.001

Hence this finding helped interpret that as the level of knowledge regarding BPCR among the ASHAs increased, their skill level regarding the same also increased.

DISCUSSION:

The findings of the present study highlighted the socio-demographic characteristics of AHSAs revealing that majority of them belonged to the age group of 30 - 39 years and were predominantly married. These findings align with the result of other supporting literature, which similarly reported that most of participants were within the same age range and were married **[15]**. This consistency across the studies underscores a potential trend that is significant as it reflects not only the age demographic profile dynamics within the ASHA workforce but also the cultural context in which they operate. Additionally, the findings of the current study also highlight a concerning trend regarding the training of ASHAs in context of BPCR. The fact that a significant section of the participants had received two or fewer rounds of training indicated a potential gap in the knowledge and skills necessary for effectively promoting BPCR in their communities. This aligns with the findings of another literature which also

reported that majority of the ASHAs had limited training rounds, suggesting a broader issue within the training frequencies for the ASHAs **[11]**. These findings emphasizes the need for enhanced training opportunities for the ASHAs in BPCR by increasing the frequency of quality training which can in turn empower them to fulfill their roles more effectively. Also future researches could be done focusing on identifying the barriers to training delivery mechanisms and exploring innovative strategies to improve the training experiences of ASHAs.

While a decent portion of the participants of the present study demonstrated adequately good levels of competency in terms of knowledge regarding BPCR, however a notable segment of the ASHAs exhibited only a moderately satisfactory level of knowledge. This finding resonates with previous researches, which similarly highlighted gaps in knowledge among ASHAs in this domain **[11, 16]**. The probable reason for the ASHAs to have a moderate level of knowledge regarding BPCR in both the studies, might be due to the limited number of capacity building training opportunities for them. The retention of knowledge over time can be affected by the limited rounds of training, leading to competency decay.

The present study also highlighted a critical gap between the knowledge and skill levels of ASHAs. Although a notable majority of ASHAs demonstrated some understanding regarding BPCR, however their ability to translate this knowledge into effective skills remained severely lacking. Similar findings were reported in previous study in which a minimal proportion of the participants were competent in diagnosing and managing complications which is one among the components of BPCR. The participants had adequate knowledge regarding BPCR but were not able to implement in actual practical situations **[16]**. The reasons for this shortfall could be multifaceted, including insufficient hands on training, lack of ongoing review based mentoring or over-burdening of ASHAs with multiple responsibilities, diluting their skill based focus. This result underscore the necessity of enhancing training programs for ASHAs that not only focus on theoretical knowledge but also emphasize practical skills.

CONCLUSION:

ASHAs are the grass-root level community health care workers, who have direct, ongoing contact with pregnant women and their families. Till date they have a vital support to the health delivery system. Strengthening their potential to deliver effective BPCR can help massively improve the number of skilled

birth attendance thereby playing an equally important role in restrict the number of maternal mortality or morbidity. Appropriate engagements at district and facility levels are being taken to enhance the performance of ASHAs in delivering BPCR, however a thorough scrutiny of the entire process has become the need of the hour. The study advocates for the systematic identification of factors that hinders the ASHAs from developing their competencies as well as in delivery quality BPCR to the actual beneficiaries. The present study paves the way for future researches, whose focal point is on identifying and implementing focused interventions in order to enhance the competencies of AHSAs.

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