Term paper



Low Weight Gain in Newborn Study

Student's Name University Course Professor Date



Low Weight Gain in Newborn Study Target Population

The Family Nurse Practitioner research would concentrate on local pediatrician's infants. The scientists want to know why these newborns grow little weight. Research investigations need a suitable target population to achieve relevance and generalizability (Cash et al., 2022). Due of its emphasis on babies from a particular region, this research can generate representative data and improve generalizability.

Values

The researchers will compute the sample size based on the mean to obtain the mean weight within a margin of error.

The values provided give important insights into the study:

Critical value (1.96): Research studies utilize a 95% confidence interval. Greater confidence needs a bigger sample size but improves estimate accuracy (Serdar et al., 2021). This study should use a 95% confidence level, which is universally acknowledged in medical and health research and balances accuracy with practicality.

Standard deviation (10 pounds): Babies' estimated weight variation. A bigger sample size is needed to obtain accuracy since a higher standard deviation implies more population variability (Serdar et al., 2021). Previous investigations or pilot data might have informed this number, which is crucial for sample size computation.

Margin of error (5 pounds): The greatest allowed variance between the collected data mean and the real population mean. Smaller margins of error demand more samples but provide more accurate estimates (Serdar et al., 2021). This research on infant weights uses a 5-pound margin of error, which provides for a tight range with a manageable sample size.

Sample Size

Based on the template and values, this study's sample size is 15.3664. It is rounded up to 16 since it indicates the number of persons.

The study's 16 infants should be enough to determine the sample's mean weight within 5 pounds and with 95% confidence. The researchers can increase the sample size if possible since a bigger sample size yields more accurate and dependable estimations (Jenkins & Quintana-Ascencio, 2020). Statistically, a sample size of 16 is sufficient, but increasing it can enhance power and dependability, if resources and time allow.



Application

As a Family Nurse Practitioner (FNP), this research can identify local infants with weight growth concerns. Identifying these characteristics helps FNPs assist new parents fulfill weight development and health requirements. FNPs help families and communities stay healthy (Dlamini et al., 2020). FNPs monitor newborn development and address feeding and weight issues. Identifying the reasons of inadequate weight development and providing targeted therapy and education can help families during this critical stage.

This study might be unable to secure parental consent and enough babies from the local doctor. FNPs might have to collaborate with the doctor and carefully address parents' research concerns. Increase involvement by establishing trust and promoting study benefits. Ethical and transparent recruitment and informed consent may be achieved by FNPs using family ties and communication skills.

FNPs should also ensure that research adheres to moral guidelines and safeguards infants and their families (Dlamini et al., 2020). Principles in studies involving humans comprise informed permission, confidentiality, and risk avoidance. Ethical and patient protection training prepares FNPs to uphold these ideals and safeguard research participants' rights and interests.

The findings of this study and their distribution via FNPs could improve the knowledge of newborn health and impact evidence-based approaches to improve the growth and development of infants. Furthermore, research, legislative changes, or resource distribution to address the reasons of inadequate newborn weight rise can be recommended by this study.



References

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