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| 3: Reliability  Lecture objectives:  Students will be able to   1. recognise the nature and importance of reliability in research 2. distinguish the different types of reliability 3. understand the ways through which reliability can be achieved in research   **Lecture content:**   * In addition to validity, reliability is the second aspect to address when ensuring the quality of research and research instruments in particular.   **Reliability** means the degree to which the same instrument provides a similar score when used repeatedly; that is, the consistency of the results obtained from the measurement procedure.  Reliabilitycan be measure through different methods:  **Test-retest reliability:** this type of reliability is achieved by administering the same questionnaire or test twice with a gap of time (interval) between both tests. The purpose is to check whether similar results will be obtained in the second time. the correlation is then checked between the test and re-test using statistical procedures such as ‘pearson’ coefficient. The stability of the results over time is a positive indicator of reliability.  **Inter-rater reliability: (**other relevant terms may include inter-scorer, inter-coder, inter-observer reliability. Instead of relying only one rater to obtain scores for a test, two or more raters are invited to give scores to the same test. The degree of agreement represented in percentage is an indicator of the consistency of the results. Intra-rater reliability, on the other hand, refers to the comparison of the results with the results obtained from the same scorer after an interval of time.  **Split**-**half method**: this involves dividing all the items of a test into two halves, then evaluating and comparing the correlation between the scores of the two halves. Consistency is expected to be found after comparing them. Because the divided test items should be equivalent, it is problematic to know on what basis to divide the items. One effective way is to separate odd items from even ones.  **Equivalence/ alternate forms:** this type share some similarities with the test-retest method. However, instead of using the same measure after an interval of time, a different equivalent form of an instrument is used.  **Statistical tests used in ensuring reliability:**  Cronbach’s alpha and Kuder-Richardson are examples of formula used in revising reliability. The internal consistency is revealed by Cronbach alpha as indicated in the table below.   |  |  | | --- | --- | | **Cronbach's alpha** | **Internalconsistency** | | 0.9 ≤ α | Excellent | | 0.8 ≤ α < 0.9 | Good | | 0.7 ≤ α < 0.8 | Acceptable | | 0.6 ≤ α < 0.7 | Questionable | | 0.5 ≤ α < 0.6 | Poor | | α < 0.5 | Unacceptable |   Task: find on the net articles; then, consider how reliability is addressed in them. |