

**PURDUE
UNIVERSITY****DEPARTMENT OF PHYSICAL EDUCATION, HEALTH
AND RECREATION STUDIES**

RECEIVED 23 1984

To: Avanelle Kirksey
From: Larry S. Verity *LSV*
Re: Purpose of the Egyptian Trip (3/12/84 thru 3/26/84)
Date: April 10, 1984

The purpose of my trip to Cairo, Egypt included the following aspects:

- 1) To train those personnel involved with the RMR area in the proper operating procedures of the Beckman Metabolic Measurement Cart (MMC) and in the data collection procedures.
- 2) To initiate the collection of RMR data.
- 3) To finalize the format of the RMR data sheets.
- 4) To develop a filing system for the RMR data.

The training of RMR personnel was accomplished during the first week of my visit. Unfortunately, calibration of the MMC was impossible as the precision gases which were ordered by Dr. Ismail in January 1984 were cancelled by the Nutrition Institute. Therefore, no RMR data was collected.

The format of the RMR data sheets was revised to include two observers for height and weight determinations of each subject. In addition, information was added which dealt with the intra-observer variability of those measurements.

Finally, a filing system for the RMR data was developed and explained to Nancy Meyer and Dr. El-Naggar.



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To: Avanelle Kirksey

From: Larry S. Verity

Re: Daily log of Egyptian trip - 3/12/84 thru 3/26/84

3/12/84 Departed from Purdue Airport at 12:30 p.m.

3/13/84 Arrived in Cairo, Egypt at 1:40 p.m. A Nutrition Institute representative met me at the airport. Customs impounded the three boxes of excess baggage which contained supplies and equipment for various aspects of the CRSP Project. Left airport and arrived at Shepherd's about 4:45 p.m. Dr. Abdelwahab El-Naggar came to the hotel at 7:00 p.m. to welcome me.

3/14/84 Went to the Nutrition Institute at 9:00 a.m. I met with Farouk Shaheen to discuss the training of personnel (M.D.'s) and the development of a testing schedule. He assured me that the physicians would be available for training and a testing schedule would be determined before moving equipment to Kalama.

I met with Nancy Meyer and discussed with her the RMR protocol, RMR data sheets and objectives of my trip. Nancy expressed concern over the collection of height and weight data by one observer. This would be discussed with Farouk Shaheen. N. Meyer introduced me to the secretarial staff and other personnel.

I met briefly with Dr. Osman Galal and he welcomed me to the Nutrition Institute and expressed a sincere desire to commence the RMR data collection. Then, I went to the room where the metabolic cart was stored. It was apparent that some damage was incurred en route from West Lafayette to Cairo. Operation of the metabolic cart seemed alright following an examination of all operating procedures, except calibration of the gas analyzers. Dr. El-Naggar and Kamelia met with me to review some of the operating procedures of the cart. In addition, materials that explain the necessary functions of the cart were compiled and given to the secretaries for copying (xerox). Such materials will be given to physicians and assistants who will be involved with the RMR data collection.

At 7:30 p.m., Dr. El-Naggar and Larry went to the National Sports Research Center to meet with Dr. Farouk Abdel Wahab and to develop a training schedule for the assistants associated with RMR and a daily testing schedule relative to the maximum number of subjects that could be tested each day. It was determined that selected physical educators be contacted about the training sessions that will be held throughout Saturday and Sunday; testing will commence on Tuesday. Approximately 1

physician and 2 physical educators will be needed to assist in the RMR data collection; a maximum number of eight subjects can be tested in a six hour period; and we must prepare a schedule for the testers which is based on their availability.

3/15/84 · Went to the Nutrition Institute at 9:00 a.m. Attended a CRSP project meeting at 9:30 a.m. Data collection progress was discussed. Following the meeting, I met with N. Meyer and discussed plans for training all assistants, as well as initiating the collection of RMR data. Additional equipment (i.e., height and weight scales) for training/data collection will be obtained from Farouk Shaheen. Training sessions will be held Saturday (p.m.) and Sunday (a.m. and p.m.) for all assistants who are available during those times. Metabolic cart and other equipment/supplies will be moved to Kalama on Monday (3/19/84) and Dr. Ahab will be contacted about the availability of an auto for transport of equipment by Larry. Dr. Galal will be informed of the transport on Monday and the start of testing on Tuesday (3/20/84) by Larry. Also, snacks for subjects following RMR data collection will be discussed. N. Meyer suggested that I contact Senaya (data management) about subjects that should be tested this week (3/19-3/25). Also, I was made aware of the need for an informant at village to notify subjects about their scheduled RMR test time.

Met with F. Shaheen about the need for blankets, sheets and mouthpiece cleaner for testing. Also, it is necessary to inform physicians about the training sessions over Saturday and Sunday. F. Shaheen will procure all necessary supplies mentioned and will inform the physicians about the RMR training.

The Beckman representative (Mohammed El Said) was notified about the transport of the MMC to Kalama on Monday. Dr. Ahab was concerned about specific procedures to follow in transporting this equipment could be placed on its side during transport. Few, if any, specific procedures were suggested for transporting the MMC.

Met with Dr. Galal about the transport of equipment on Monday. It was determined that such a timetable should be followed.

3/16/84 Observance of the holy day.

3/17/84 Met Nancy at Nutrition Institute to determine progress on: ht/wt scale; van for moving equipment and boxes in customs. Nancy would check on these concerns immediately.

Went to Shepherds for letters describing contents of three boxes in customs as someone will be going to airport to pick up these boxes. Those boxes belong to Dr. Kirksey to be delivered to the Nutrition institute in Cairo.

After arriving at Nutrition Institute, met with Dr. O. Galal concerning transport of metabolic cart on Monday, schedule of testing for upcoming week, a small amount of food for subjects after testing, and an informant at village to contact subjects about their scheduled RMR time. Transport will commence on Monday (a.m.) for Kalama. Schedule of RMR testing will be presented on 3/18/84 to Dr. O. Galal for the following week's events; food will be provided to all subjects after RMR test; and a physician will act as an informant temporarily.

Called M. El-Said (Beckman) concerning transport of MMC; however, he was not available.

Met with Dr. F. Shaheen about notifying medical students of the RMR training Saturday (at 4:00 p.m.) and Sunday (9:00 a.m. and 4:00 p.m.). Blankets, sheets and mouthpiece cleaner will be provided (on order) for Tuesday's testing.

Met with Dr. Ahab concerning transport of MMC on Monday and the procurement of calibration gases. Decided that Larry will supervise transport and a van will be available on Monday. Also, gases are in the process of being obtained. Hope to transport gases with equipment on Monday.

RMR record forms need small addition/revision to comply with anthropometric specifications of ht/wt data collection. Revision of the data sheet included the addition of two observers for height and weight determinations of each subject.

Delivered a message to Dr. Saif at the Tropical Disease Control for Dr. Gafar concerning parasitology. Dr. Koura will assist Dr. Gafar in this area.

Met with 3 medical students, Kamelia and Drs. A. W. El-Naggar and F. Abdel Wahab at 4:00 p.m. in the Nutrition Institute to go over operating procedures of the MMC. Essentially, calibration/line balance procedures are most important and were stressed; however, no calibration was performed as there were no calibration gases for this procedure. Loading the nutritional program to provide information relative to RMR was of secondary importance. Hands-on experience was provided and trial run metabolic data were collected on a few of the medical students in order to observe the type of raw data obtained from the metabolic cart.

Met with Drs. A. W. El-Naggar and F. Abdel Wahab at 8:00 p.m. in the National Sports Research Center to develop a testing schedule for the upcoming week involving both testers and subjects. It is anticipated that 4 or 5 days will be devoted to RMR data collection each week.

3/18/84

Went to Nutrition Institute at 8:30 a.m. for training of assistants with the metabolic cart. A few physicians (4), Kamelia and Dr. El-Naggar attended the 9:00 a.m. session which lasted until 11:30 a.m. Discussed with data management the need for obtaining information on those individuals who were to be tested during the upcoming week (3/20-3/24). Managed to get information on target subjects from which a schedule of RMR testing will be developed. A schedule for RMR testing was made and will be presented to both data management and Dr. O. Galal tomorrow.

At 4:00 p.m. met with 5 physicians and Dr. A. W. El-Naggar to go over the operating procedures of the metabolic cart. Although much was accomplished, calibration of the instrument has not been performed. Asam, who is from the Sports Research Center, brought Dr. Farouk Abdel Wahab's calibration gases to the Nutrition Institute. However, the concentrations of those gases were in doubt. Following the training session (6:30 p.m.), we went to the Sports Research Center to confirm relative percentages of calibration gases. Unfortunately, the MMC cannot be calibrated with Dr. Farouk's gases due to: uncertainty of percentages of CO_2 , O_2 , N_2 ; there is no O_2 - free gas; and/or the electrical system of the cart may be malfunctioning. Therefore, we will not transport equipment on Kalama on Monday.

3/19/84

Went to Nutrition Institute to attempt trouble-shooting of MMC. Cancelled transport plans with Dr. Ahab and explained such reasons. Talked briefly with Dr. O. Galal to explain the present situation of RMR data collection schedule and will put transportation of equipment on "hold." Following my efforts to determine the problem of the MMC, I noticed that the coupler housing for the O_2 cable on the back panel of the O_2 cable on the back panel of the O_2 meter was damaged. This may/may not be the problem with the equipment. Regardless, calibration gases: 1- O_2 free; 2- O_2/CO_2 mixture with known % must be obtained for calibration of the instrument. Therefore, the Beckman representative in Cairo was called to service the MMC and procure calibration gases; however, no service was provided.

Informed Nancy Meyer of the dilemma which the RMR group is in at the present moment and the need to procure calibration gases. Called Dr. Ismail to discuss alternatives: Dr. O. Galal, Beckman must be contacted.

3/20/84

Went to Nutrition Institute in a.m. to call Beckman representative in Cairo. Explained the need for an electrical engineer to determine status of MMC. Mohammed El-Said of Beckman would contact the Nutrition Institute today as to the availability of a service visit to examine the MMC, however, no contact was made. Discussed the issue of calibration gases via Mr. Moustafa Monsour of NAMRU; however, this was unsuccessful. Met briefly with Dr. O. Galal to inform him of the RMR predicament. He will try to contact individuals who perform blood gas analyses, as the concentration of O_2/CO_2 in our calibration gases could be determined via this method.

Met with Nancy to discuss a filing system for the RMR data. It was suggested that boxes act as a file for the data. The 4 boxes will be divided into (3) block numbers and further, each block will be divided into household numbers. Each target subject within each household will have an individual file. Attached to the front of each individual file folder will be an information sheet concerning tests performed on that individual and other essential ID information. In addition, a chronological list of RMR data will be kept on subjects tested. Following a test on a target subject, the individual files will be placed in a second set of boxes (by block and HH no's.). Once all files from initial set of boxes have been placed in the second set of boxes, the quarter testing should be finished and the next quarter's testing can commence.

3/21/84

Went to Nutrition Institute to call Beckman representative for service on MMC. All repairmen and Mohammed El-Said were not in the office. Thus, no service/repair will be obtained today. Called Moustafa Monsour to inquire about the nearest location of precision gases for our purposes. M. Monsour believed Kenya, Italy, Kuwait and France would be able to provide such gases in almost 4-6 weeks. Gases procured by the Nutrition Institute arrived today, however, no specifications as to the O₂/CO₂ concentrations was given. Thus, we are still unable to calibrate the MMC and to determine if the MMC is functioning properly. Informed O. Galal about the problem of the MMC and the calibration gases. Discussed the problem with Nancy and decided that there was little that I could do at the present moment. Called Dr. Ismail to discuss the present problem and decided that precision gases must be obtained from a foreign source via Beckman.

3/22/84

Went to Egyptian Finance Co. and exchanged dollars. Went to Nutrition Institute about 9:30 a.m. Called Beckman and still there was no serviceman available for checking/repairing the MMC. Talked with M. El-Said about the gas situation. Initially when Dr. Ismail was in Egypt (12/83-1/84), appropriate procedures were to be taken to obtain precision gases from Beckman (foreign source); however, this was cancelled by the Nutrition Institute. Once again, we will take the necessary steps to procure precision gases through Beckman; however, the cost of such gases may be rather exorbitant. M. El-Said will let us know about the cost of gases and provide a service representative on Saturday. Had a CRSP meeting from 11:30 - 1:00 p.m.

Met with Nancy and Dr. El-Naggar to discuss RMR filing system and the need to develop this system before I leave for U.S. Also, discussed the need to procure precision gases. Larry and El-Naggar will meet with O. Galal on Saturday concerning assistants to be involved in project; the need for precision gases via Beckman; and the need to photocopy data sheets for target individual file.

- 3/23/84 Observed holiday
- 3/24/84 Went to Nutrition Institute - met A. W. El-Naggar and outlined points to address in discussion with O. Galal. Called Beckman to request a service repairman; however, Beckman was unable to fulfill such a request. Also, discussed the procurement of precision gases in terms of dollars and time. The approximate cost will be \$1000 and should be delivered in 4 weeks. Decided that there is a need to review the international warranty that the CRSP project is paying for the MMC, as the service from local representatives is poor and fails to uphold the contractual agreement.
- Went over weekly maintenance and log recording of the MMC with El-Naggar. Also, pressure balances of various lines were reviewed. Talked with O. Galal concerning precision gases, space for data file, and assistants for RMR area. Decided to purchase gases via Beckman. Space for data storage and transposing of data to report forms will be provided in the outpatient clinic where the MMC is presently located. Also, assistants for RMR data collection will include physical educators, physicians, and selected individuals from the Nutrition Institute. Placed an order of precision gases with Beckman and will confirm this order on 3/24/84. Went to National Sports Research Center to review all procedures involved with data reporting/calculations with Dr. El-Naggar and F. Abdel Wahab.
- 3/25/84 Called Dr. Ismail at 7:15 a.m. to discuss progress in RMR area. The product of my trip (data) has not been successful; however, the process (training; organized data file; data sheets; assistants being paid; and finalizing all aspects of RMR area) has been successful.
- Had a 9:00 meeting with Brent Hartley from American Embassy. Discussed my association with CRSP/AID - spot check on U.S. visitors on AID projects to determine purpose of visit.
- Went to Nutrition Institute. Called Beckman to confirm request of calibration gases. Also, unable to have a repairman service the MMC - needs to be examined when in U.S. Obtained data from Nancy to be given to Nell Kirksey, along with letters, etc. Gave my good-byes to all at Nutrition Institute.
- Received a message from O. Galal at 10:00 p.m. which indicated that a gas company in Cairo may be able to do gas analyses to determine concentrations of gases.
- 3/26/84 Farouk Abdel Wahab drove me to the airport at 7:00 a.m. Departed Cairo airport at 9:25 a.m. Arrived in West Lafayette at 10:50 p.m.