

U.S. Army Research Institute for the Behavioral and Social Sciences

Research Report 1621

The Mobilization of Individual Ready Reserve (IRR) Infantrymen During Operation DESERT STORM: Training Performance Analysis



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Kenneth L. Evans U.S. Army Research Institute



July 1992

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Research Report 1621

The Mobilization of Individual Ready Reserve (IRR) Infantrymen During Operation DESERT STORM: Training Performance Analysis

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In early 1991 a partial mobilization of the Individual Ready Reserve (IRR) occurred as part of Operation DESERT STORM. Fort Benning was the primary processing and training site for IRR infantrymen during this mobilization. Because the Fort Benning Field Unit of the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) conducts research on training and training technology with particular emphasis on infantry concerns, the Commanding General of Fort Benning enlisted ARI's support to collect and archive thorough information about this historic mobilization of Infantry reserves.

This report is our fourth research publication examining the IRR mobilization, and it is the second focusing on infantrymen. This research investigates the influence of seven training factors, several not previously explored, on the performance and attitudes of IRR infantrymen. Some of the results obtained offer additional support to findings of our previous research. Other results are less definitive, although they suggest potentially important factors to consider in case IRR soldiers are mobilized in the future. Initial results were briefed to Fort Benning's Chief of Staff in August 1991. Final results were briefed to Fort Benning's Commanding General in March 1992.

in Allen

EDGAR M. JOHNSON Technical Director

Several individuals contributed to this research. Fred Heller, Lisa Kelly, and Carol Ried, in particular, provided valuable database management support that was extraordinary and greatly appreciated.

THE MOBILIZATION OF INDIVIDUAL READY RESERVE (IRR) INFANTRYMEN DURING OPERATION DESERT STORM: TRAINING PERFORMANCE ANALYSIS

EXECUTIVE SUMMARY

Requirement:

As part of Operation DESERT STORM, the U.S. Army ordered some of its Individual Ready Reserve (IRR) soldiers to report for active duty in January 1991. The IRR is composed of Reserve Component members who are not assigned to units and are subject to mobilization on an individual basis because they usually have some remaining military service obligation. Because Fort Benning was the primary processing and training site for IRR infantrymen during this historic mobilization, the Fort Benning Field Unit of the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) was asked by the Commanding General of Fort Benning to examine in particular those factors thought to influence the mobilization training performance of IRR infantrymen.

Procedure:

One training company of 241 light infantrymen was observed throughout its in-processing, basic skills refresher training, and out-processing. Biographical and attitudinal information about these infantrymen was obtained from a 12-page IRR survey and from a systematic sample of individual military personnel records. Training performance scores were obtained from instructors at each training site. Seven training or experience variables were identified for analysis: recent Active Component experience, recency of training, general aptitude, Combat Training Center experience, actual combat experience, prior skill proficiency, and COHORT (Cohesion, Operational Readiness Training) unit experience. An analysis was then conducted to determine how these variables related to the training performance and attitudes of the observed infantrymen. Five performance measures were examined: total points obtained on the Army Physical Fitness Test (APFT), number of target hits obtained on a Squad Automatic Weapon (SAW) 10-meter firing exercise, number of hits obtained on a SAW night firing exercise, number of rounds used in zeroing the M16A2 rifle, and number of hits obtained during rifle marksmanship qualification. Five attitudinal measures were examined: perceived needs for additional training in preparation for an active duty assignment, perceived needs for additional training in preparation for combat, perceived physical combat readiness, perceived overall combat readiness, and preferences for a combat zone assignment. Finally, a supplementary multivariate analysis of attitudinal variation was conducted with a more complete sample of survey and personnel records data from previous IRR research.

Findings:

- With the exception of APFT performance, examined under less than ideal conditions, most IRR infantrymen performed well during refresher training and demonstrated little apparent decay in their basic skills.
- Soldiers with recent Active Component experience (i.e., they entered the IRR directly from an Active Component unit assignment) performed better and had lower perceived needs for additional training.
- Soldiers more recently or more frequently trained on particular tasks tended to perform those tasks better during mobilization.
- Soldiers with higher general aptitude performed slightly better and had stronger preferences for a combat zone assignment than soldiers with lower general aptitude.
- Soldiers with Combat Training Center experience had lower perceived training needs and higher perceived combat readiness. Combat Training Center experience was the single best predictor of training and combat attitudes during mobilization.
- Soldiers who had been awarded the Expert Infantryman Badge (EIB) felt more ready for combat than other soldiers.
- Soldiers with actual combat experience (from Operation JUST CAUSE) had lower perceived training needs, much lower preferences for a combat assignment, and less uncertainty in their combat attitudes.
- Length of service in the IRR and COHORT unit experience were generally unrelated to the performance and attitudes of these IRR infantrymen.

Utilization of Findings:

Initial results of this research were briefed to Fort Benning's Chief of Staff in August 1991, and final results were briefed to Fort Benning's Commanding General in March 1992. Together with previous ARI research on the IRR mobilization, these findings can be used to guide the development of improved manpower and training plans for future IRR mobilizations.

THE MOBILIZATION OF INDIVIDUAL READY RESERVE (IRR) INFANTRYMEN DURING OPERATION DESERT STORM: TRAINING PERFORMANCE ANALYSIS

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THE MOBILIZATION OF INDIVIDUAL READY RESERVE (IRR) INFANTRYMEN DURING OPERATION DESERT STORM: TRAINING PERFORMANCE ANALYSIS

Introduction

As part of Operation DESERT STORM, the U.S. Army ordered some of its Individual Ready Reserve (IRR) soldiers to report for active duty in January, 1991. The IRR is composed of Reserve Component members who are not assigned to units and are subject to mobilization on an individual basis because they usually have some remaining military service obligation. Although most soldiers typically do not receive any training while in the IRR, most have completed an active duty contract and have previously served with an active or reserve unit. Thus, the IRR represents a significant pool of pre-trained individuals available to fill shortages in active and reserve units during a national emergency. Notwithstanding important contributions made by IRR soldiers in Operation DESERT STORM, the role of the IRR may be even greater in the future, as the IRR pool of soldiers is projected to nearly double in the next century (Chadwick, 1991).

Only a portion of the Army's IRR pool was activated during the partial mobilization that occurred in January, 1991. Specifically, only about half of those recently trained (RT) soldiers that had been transferred to the IRR in the preceding 12 months (RT12s) were mobilized. Although RT12 soldiers are considered to be proficient in their military skills, at least in theory, they comprised only about 12% of the IRR near the time of the actual call-up (Chadwick, 1991). Compared with other soldiers in the IRR, however, RT12s are likely to require lesser amounts of training during a mobilization.

The mobilization of RT12 soldiers from the IRR was an unprecedented occurrence. Near the time these soldiers began reporting to their mobilization stations, the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) initiated an extensive examination of several important issues related to the call-up. Responding directly to the Director of Military Personnel Management, ARI formed an IRR Training Task Force that examined key personnel and training issues with a broad focus across many career management fields (CMFs) and military occupational specialties (MOS). In particular, this task force examined the extent of skill decay among RT12 soldiers (Wisher, Sabol, Sukenik, & Kern, 1991), as well as their attitudes, motivation, and concerns (Steinberg, 1991). Responding to a request from the Commanding General of Fort Benning, ARI's Fort Benning Field Unit examined a similar set of issues with a detailed focus on the infantry soldiers (CMF 11) that were mobilized there (Terry, Evans, Heller, & Smith, 1992).

In their analysis of the extent of skill decay in the IRR, Wisher et al. (1991) developed a comprehensive database that combined soldier information from five separate sources. The Army Training Requirements and Readiness System was used as their major source of demographic information about IRR soldiers reporting for mobilization (n = 17,306), including infantry soldiers reporting (n = 3,869). Personnel records of some reporting soldiers were found in the Military Personnel Command's Enlisted Master File (n = 13,173). This file was used to examine 22 variables, including Skill Qualification Test (SQT) percentile score and date of separation from active duty (to estimate the skill retention interval). Armed Forces Qualification Test (AFQT) scores were obtained from annual cohort files provided by the Defense Manpower Data Center (n = 12,125). Developed by ARI's IRR Training Task Force, a two-page questionnaire was administered to some soldiers at each of seven U.S. Army Training and Doctrine Command (TRADOC) mobilizations (n = 3,051), generally just before their departure. Four of its 31

items were used by Wisher et al. (1991) to gauge soldier perceptions about their own skill decay, need for additional training, and individual preparedness. In addition, performance scores on a wide variety of diagnostic, certification, and weapons qualification tests were obtained from the seven TRADOC mobilization stations (n = 6,390).

From their analysis of data from these five sources, Wisher et al. (1991) reported four major findings. First, job knowledge (based on written diagnostic and certification test scores) decayed mostly within six months, though weapons qualification skills decayed mostly after 10 months. Second, previous SQT performance was the strongest predictor of skill decay for each type of test. AFQT score also was a strong predictor of skill decay on diagnostic and certification tests, but had no predictive value on weapons qualification tests. Third, skill decay was found to be lower in Infantry, Maintenance, and Supply fields and higher in Armor and Combat Engineering fields. Fourth, the skill retention of soldiers entering the IRR directly from active duty was higher than those not entering directly from active duty. In addition to these four major findings, Wisher et al. (1991) found that a soldier's own assessment of skill on the questionnaire was a good indicator of actual performance at the mobilization station.

In her analysis of IRR attitudes, motivation, and concerns, Steinberg (1991) examined soldier responses to the 31-item questionnaire developed by ARI's IRR Training Task Force (n = 3,051). This two-page questionnaire was administered, typically near the time of out-processing and deployment, to some soldiers at each TRADOC mobilization station, including Fort Benning (n = 806). Most IRR soldiers were found to have negative attitudes about being called up. Further, these attitudes appeared related to their feelings about previous Army service, their liking of their primary MOS, their technical preparedness, their motivation to perform Army duties, and their confidence about performance in combat. However, Steinberg (1991) also found that attitudes did not differ as a function of demographic factors (e.g., age, marital status, number of dependents, employment history, income, and education).

Terry et al. (1992) examined three sources of data to construct a profile of the important attitudinal, biographical, and performance characteristics of IRR infantrymen mobilized at Fort Benning, GA. First, survey data were collected from 2,641 soldiers in 15 training companies, using either an initial 9-page questionnaire (n = 1,575) or a revised 12-page questionnaire (n = 1,066). Unlike the questionnaire administration of the IRR Training Task Force (Steinberg, 1991; Wisher et al., 1991), these questionnaires were administered after in-processing and usually before any training had been conducted. Next, supplementary personnel data, based on documents in Military Personnel Records Jackets (MPRJs), were sought from a systematic sample of approximately one quarter of those soldiers surveyed. Finally, training performance data were obtained from a variety of performance-oriented diagnostic, certification, and weapons qualification tests, although this data generally could not be tracked with either the survey or personnel data.

From their analysis of the data from these three sources, Terry et al. (1991) found the typical RT12 infantryman to be a 23-year-old high school graduate who was single with no dependents. Although there was considerable diversity in the civilian and military backgrounds of soldiers in this IRR sample, the typical infantryman had completed a 2-year or 3-year enlistment contract with the rank of Specialist 4 or Corporal. He had chosen not to re-enlist, because he either wanted to pursue further education or because he simply did not like military life, and he had fulfilled about 6 months of his remaining military service obligation as an inactive soldier in the IRR. Because an involuntary mobilization of IRR soldiers had never occurred previously, he was shocked to receive a recall notice ordering him to report to his mobilization station within a matter of days. Although he did not like having his job, college education, and/or family life interrupted, he reported as

ordered. From his perspective, he would have preferred longer notice, more informative orders, and more efficient and individualistic treatment during in-processing. As the air campaign of Operation DESERT STORM continued and as preparations were being made for the ground campaign, he thought it very likely that he would see combat, and he was not sure he was ready. He thought he needed more training, particularly in advanced skills, though he thought such training could be provided upon assignment to a unit. During his refresher training at Fort Benning, he demonstrated reasonable physical fitness and a fairly high level of proficiency in his basic skills, despite being somewhat insulted that he was in a basic training environment. Throughout the mobilization, he was frustrated by a lack of definitive information, he was concerned about his family, and he wanted to have more free time. He was eager to learn of his new unit assignment and he would have been pleased to be stationed either near home or with members of his old unit. In summary, Terry et al. (1992) found that the typical IRR infantryman was unhappy at the time he was surveyed, as he wanted to return to his civilian life as quickly as possible. Though he did not like being recalled to active duty, he wanted to contribute in a meaningful way and to make the most of a bad situation.

Soldier responses to the various IRR questionnaires appear to be remarkably similar, though these questionnaires differed in their scope, MOS specificity, and time of administration. To the extent that the questionnaires developed by Terry et al. (1992) can be compared with the questionnaire developed by the IRR Training Task Force (Steinberg, 1991; Wisher et al., 1991), responses to similar items were rarely found to vary by more than a few percentage points. Thus, it appears one can assume that the background, attitudes, and concerns of IRR infantrymen were not greatly different from those of other IRR soldiers. Because the questionnaires of Terry et al. (1991) usually were administered before training and the questionnaire of the IRR Training Task Force (Steinberg, 1991; Wisher et al., 1991) usually was administered after training, it also appears one can assume that this training did not have a dramatic impact on the prevailing attitudes and concerns of IRR soldiers.

The present report is the fourth ARI research publication examining the IRR mobilization, and it is the second focusing on IRR infantrymen. Compared with previous research, the present effort used a more detailed and direct approach, limiting its scope primarily to the in-depth observation and analysis of infantryman performance in one IRR training company. For this reason, it offers the most complete picture of training performance and attitudes in any group of IRR soldiers mobilized, though this group was comparatively small. The decision to directly observe a single training company was made for three reasons. First, it was thought that such an approach would aid in the interpretation of soldier responses to the questionnaires administered by Terry et al. (1992). The information obtained did prove to be useful for that purpose. Second, practical resource constraints dictated that only one company could be examined in such an intensive manner. Third, it was thought that detailed information obtained from a single company would have helped to channel our research resources more efficiently, had additional IRR mobilizations occurred during Operation DESERT STORM.

With few exceptions, the performance and attitudes of IRR infantrymen in the training company observed were not found to differ markedly from the performance and attitudes of other IRR soldiers, as reported in previous research (Steinberg, 1991; Terry et al., 1992; Wisher et al., 1991). A simple description of the performance and attitudes of a single company of soldiers, therefore, would not contribute much to what has already been reported, which was based on much larger samples. However, the relative completeness of the personnel, performance, and attitudinal data obtained from this one IRR company permitted a variety of training issues to be explored, many of which have not been addressed previously. Thus, the present report examines a series of training

issues, or variables, and their relationship to the performance and attitudes of IRR infantrymen. Some of the results obtained offer additional support to the findings of previous research. Other results are less definitive, though they suggest potentially important factors to consider in the event IRR soldiers are mobilized in the future.

Selection of a Training Company for Observation

The IRR infantrymen mobilized during Operation DESERT STORM initially reported to either Fort Benning, Fort Drum, or Fort Ord for in-processing. Regardless of the location of their initial in-processing, they then were given 10 days of basic skills refresher training at Fort Benning. Tailored to their particular Infantry MOS (11B: Infantryman, 11C: Indirect Fire Infantryman, 11H: Heavy Antiarmor Weapons Infantryman, or 11M: Fighting Vehicle Infantryman), this training immediately preceded their out-processing for overseas replacement. For a variety of reasons, a small percentage of soldiers were found to be non-deployable during the mobilization process. Most of these soldiers were either released from active duty or discharged.

The Deputy Commander of the U.S. Army Infantry Training Center selected the IRR training company to be observed, based on guidance we provided to enhance the potential generalization of findings. As only one company could be observed, we wanted the selected company to have a relatively large number of soldiers. Because soldiers were assigned to companies according to their MOS, we also wanted the selected company to be composed of soldiers in the most common Infantry MOS (i.e., 11B: Infantryman). Additionally, we wanted to identify the selected company well before training commenced, so that its soldiers could be observed throughout in-processing, training, and out-processing. Although these selection guidelines narrowed the available choices considerably, the company selected was one of the largest, and one of the last, to be trained at Fort Benning during the mobilization.

The training company selected for observation was composed of 241 infantrymen who had initially reported for in-processing at either Fort Ord (87%), Fort Drum (11%), or Fort Benning (2%). As most of these soldiers had initially reported to mobilization stations other than Fort Benning, they went through a second round of in-processing upon their arrival for refresher training. At this in-processing, soldiers with an 11B MOS were divided into training companies according to the type of infantry unit, light or mechanized, to which they last were assigned. As a result, the selected training company was composed almost entirely of soldiers with an 11B MOS who most recently had been assigned to light infantry units.

Later analysis revealed that soldiers in the selected company were similar, in most biographical characteristics, to others trained at Fort Benning (see Terry et al., 1992). However, the company differed in two notable areas, both of which relate to the fact that it was composed almost entirely of light infantrymen. First, 31.3% of the soldiers in the company reported previous assignments to COHORT (Cohesion, Operational Readiness Training) units, with 58.5% of these reporting assignments to COHORT units of the 7th Infantry Division (Light). Only 21.8% reported previous COHORT unit experience in the Terry et al. (1992) sample, which represented all Infantry MOSs and included soldiers from the selected company. Second, this company appeared to have a dramatically greater percentage of soldiers with actual combat experience, obtained primarily in Operation JUST CAUSE. Although based on a systematic personnel records sampling of only a quarter of each company surveyed by Terry et al. (1992), 33.3% of the soldiers in the selected company's sample had been awarded the Combat Infantryman Badge (CIB). In contrast, only 9.2% had been awarded the CIB in the samples of all other companies combined.

Sources of Data

Subjective data were obtained from direct observation of soldiers in the selected IRR company throughout their in-processing, basic skills refresher training, and out-processing. A schedule of their 10 days of training, summarized by subject and task, is presented in Appendix A. In addition to numerous informal conversations with many of the soldiers and their trainers, these on-site observations helped to gauge the quality of the performance and attitudinal measures obtained, to determine the conditions surrounding their collection, and to generate several hypotheses for subsequent analysis.

Objective biographical, attitudinal, and performance data were obtained from three sources. These sources were the revised IRR survey developed by Terry et al. (1992), a systematic sample of individual military personnel records (Terry et al., 1992), and training performance scores obtained from instructors at each training site. Selected items from each of these sources were combined to create a database for the observed company on a PC-compatible microcomputer. Specifically, the company database was a dBASE III+ file having 103 numeric or character fields, subsequently converted to a Statistical Analysis System (SAS) data set. Items were included in the database if they were potentially related to training performance and if they yielded any variability between soldiers. Some items were excluded due to an excessive amount of missing data, or because they represented infrequent occurrences. A few survey items related to self-assessed performance were excluded because actual performance scores existed.

IRR Survey

The revised IRR survey developed by Terry et al. (1992) was administered to 231 of the 241 soldiers in the observed company. Survey administration occurred on the first day of training in a modern and well-equipped classroom facility near the company area. Company cadre were not present and no time limits were imposed during the administration. Most soldiers completed the 12-page survey within 30 minutes and all soldiers completed it within 60 minutes. The revised IRR survey is presented as Appendix B, with shaded items denoting inclusion in the company database.

Individual Military Personnel Records

Terry et al. (1992) sought supplementary personnel data from documents in the MPRJs of a systematic sample of 55 of the 231 soldiers surveyed. These data were obtained from either DA Form 2-1, *Personnel Qualification Record - Part II*, or DD Form 214, *Certificate of Release or Discharge from Active Duty*. Because the records of 7 soldiers could not be located, the company database included personnel data on only 48 of the 55 soldiers sampled.

Items from DA Form 2-1 included in the company database were the 10 aptitude area composite scores of the Armed Services Vocational Aptitude Battery (ASVAB), the ASVAB administration date, the weapons qualification ratings associated with the award of rifle and hand grenade marksmanship badges, the dates of their award, and the presence or absence of CIB and Expert Infantryman Badge (EIB) awards. SQT results were not included in the database, because they were found in the records of only 16 soldiers sampled.

Items from DD Form 214 included in the company database were the type of separation, the character of service, the separation authority, the separation code, the reentry code, and the narrative reason for separation. In a few instances, DD Form 214 was used to obtain information about awards and badges, because a completed DA Form 2-1 was not found in the MPRJ.

Training Performance Scores

Training performance data were obtained from instructors at each training site. These data were in the form of either numerical scores or GO/NO GO ratings (i.e., pass/fail ratings). Included in the company database were numerical performance scores on the Army Physical Fitness Test, a Squad Automatic Weapon (SAW) 10-meter firing exercise, a SAW night firing exercise, M16A2 rifle zeroing, and M16A2 rifle marksmanship qualification. Also included in the database were GO/NO GO ratings on eight training tasks. However, these ratings were not used in later analyses, either because only minimal between-soldier variability was found, or because it was thought that not all raters had used the same criteria in their assignment of ratings to soldiers.

Performance Measures

This section provides a detailed description of the five performance measures used in the training performance analysis. Descriptive statistics of company-wide performance are presented for purposes of information. Though not a part of the actual training performance analysis, which is presented later, evidence relating to measurement validity is included in this section.

Army Physical Fitness Test (APFT)

At the start of the first training day, a diagnostic APFT was conducted by company cadre on a well-lit physical training (PT) field near the company area. The push-up portion of the test began at 0500 hours, the sit-up portion began at 0534 hours, and the 2-mile run began at 0602 hours. The weather was clear, with almost no wind and a temperature slightly above freezing. Soldiers wore gloves and cold-weather PT uniforms. An estimated 25% wore new running shoes. Based on informal conversations with soldiers during the test, most reported sleeping only four hours the night before. Some voiced their belief that company performance would have been higher if more soldiers had been motivated. Several acknowledged their attempt to meet minimum performance standards exactly (i.e., 180 total points, with a minimum score of 60 points on each of the 3 events).

The APFT scorecards (DA Form 705) of 227 soldiers were obtained and any obvious errors made in the computation of scores were corrected. Due to a variety of medical complaints, one soldier did not attempt push-ups, one other soldier did not attempt sit-ups, and seven others did not attempt the 2-mile run. Because they did not attempt all portions of the test, they were not included in any analysis related to total scores, though they were included in analyses related to individual events in which they participated.

The total APFT scores of soldiers in the company ranged between 76 and 288 points, with a mean (M) of 194.33 points and a standard deviation (SD) of 41.38 points. Push-up scores ranged between 30 and 100 points (M = 67.38, SD = 13.93), sit-up scores ranged between 31 and 100 points (M = 64.88, SD = 12.53), and 2-mile run scores ranged between 0 and 100 points (M = 61.68, SD = 23.50). Of the 218 soldiers who attempted every event, only 51.4% met all performance standards. However, 81.4% met the push-up standard (n = 226), 75.2% met the sit-up standard (n = 226), and 63.6% met the 2-mile run standard (n = 220).

Because evidence existed that some soldiers were not giving their best effort, the relationship between APFT performance and attitudes was examined. As both the IRR survey and the APFT were administered to the observed company on the same day, the survey's Question 60 was used to estimate soldier attitudes during the APFT. This question asked soldiers how they felt about being recalled, with a 5-point response scale ranging from very positive (1) to very negative (5). Soldiers with positive or neutral attitudes obtained significantly higher total scores on the APFT (M = 203.64) than did soldiers with negative attitudes about the recall (M = 185.20), t(206) = 3.26, p = .0013. Of this 18-point difference between group means, over 12 points were attributed to performance differences on the 2-mile run. However, the effects of recall attitudes were apparently limited solely to APFT performance, as similar analyses of the other four performance measures found training performance to be unrelated to attitudes.

Because the conditions surrounding the diagnostic APFT were unusual and hardly conducive to peak performance, external comparisons to the observed company's performance should not be made. However, comparisons within the company are justified, as most soldiers experienced the same environmental constraints. In fact, the APFT appeared to accurately reflect the relative physical fitness differences existing among soldiers. For example, APFT performance closely mirrored self-assessed fitness on Question 32 of the survey. Soldiers reporting that they were in very good physical condition (n = 19) averaged 227.32 total points on the APFT. Similarly, those reporting a fairly good physical condition (n = 123) averaged 201.42 points, those undecided about their physical condition (n = 52) averaged 187.67 points, and those reporting that they were not in good physical condition (n = 52) averaged 166.90 points. These total score differences were found to be highly significant, F(3, 205) = 15.47, p = .0001. Another example of the APFT's validity was found during military operations on urbanized terrain (MOUT) training, on a day that it snowed. As part of MOUT training, soldiers had to climb a rope to enter a second-story window. Soldiers who succeeded on their first attempt had significantly higher APFT total scores (M = 201.34) than those who didn't succeed on their first attempt (M = 176.26), t(161) = 3.22, p = .0016.

SAW 10-Meter Firing Exercise

On the morning of the fifth training day, a SAW 10-meter firing exercise was conducted. The weather was clear and cool, with little or no wind. Scorecards (DA Form 5503-R) of only 193 soldiers were obtained, as some soldiers were on sick call and others were attempting to resolve various problems through the military pay section, the Army Emergency Relief office, or the battalion's chaplain. Three soldiers had already departed for Southwest Asia, because they were qualified to drive a Heavy Expanded Mobility Tactical Truck (HEMTT).

The performance standard on this firing exercise was 23 hits, with a maximum possible score of 39 hits. Scores in the observed company ranged from 3 to 39 hits (M = 26.36, SD = 4.81), with 89.1% of the soldiers meeting or exceeding the standard. This level of performance compares favorably with an overall IRR average of 26.06 hits (n = 1,093) and a recent initial entry training average of 21.63 hits (n = 888), based on scores provided by the non-commissioned officer in charge (NCOIC) of the range (Terry et al., 1992).

Among soldiers in the observed company, however, this performance measure was not very differentiating. For example, the 10-meter performance of 109 soldiers reporting that they had previously qualified with the SAW (Question 41B5a) was compared with the performance of 76 soldiers who had not previously qualified. It was found that the performance of soldiers previously qualifying with the SAW (M = 26.39) was not significantly different from the performance of those not previously qualifying (M = 26.66), t(183) = 0.38, p = .6992. Perhaps this finding is due to the 10-meter exercise's relatively low level of difficulty, at least for experienced infantrymen in the IRR (over 83% of the observed soldiers hit from 23 to 32 targets). It can be assumed that most of these soldiers already had acquired basic rifle and machinegun skills, which are similar to those needed for successful performance on the SAW 10-meter exercise.

SAW Night Firing Exercise

On the evening of the fifth training day, a SAW night firing exercise was conducted on a recently constructed machinegun transition range. The weather was overcast and cool, with a light to moderate wind. It rained steadily throughout the exercise. Although there was no direct moonlight or starlight, the amount of urban ambient light reflecting onto the range from a low cloud cover was more than adequate. Using the AN/PVS-4 night vision device, mounted and zeroed to a SAW by range personnel prior to firing, each soldier engaged multiple E-type silhouette targets between 100 and 300 meters. Soldiers were instructed to use 5-round to 7-round bursts as they engaged these targets with a 40-round belt of ammunition. Observers using AN/PVS-4 night vision devices recorded the number of hits obtained by each soldier. Individual scores were later obtained from company records, though scores from only two of the four platoons were found (n = 115).

In terms of the number of hits required, no performance standard was established for the SAW night firing exercise, as this particular course of fire had been used only for IRR mobilization training. However, the NCOIC of the range recalled that other IRR companies averaged between 3 and 5 hits, with the highest individual score being 8 hits. In comparison, scores in the observed company ranged from 2 to 12 hits, with an average of 3.54 hits (SD = 1.63). As was the case with the 10-meter exercise, there was little performance differentiation on the night exercise. For example, 67 soldiers previously qualifying with the SAW (M = 3.63) did not perform significantly better than 46 soldiers not previously qualifying (M = 3.48), t'(77.9) = -0.45, $p = .6556.^1$ Unlike the 10-meter exercise, the night exercise was extraordinarily difficult, with individual scores clustering near the bottom of the frequency distribution (e.g., over 90% of the soldiers obtained either 2, 3, 4, or 5 hits). Informal conversations with soldiers revealed that prior to this exercise, most had never used a night vision device in the rain with any weapon system.

M16A2 Rifle Zeroing

On the morning of the sixth training day, M16A2 rifle zeroing was conducted on a 25-meter range in accordance with the procedures outlined in Field Manual 23-9, M16A1 and M16A2 Rifle Marksmanship (Department of the Army, 1989). The weather was clear and cool, with little or no wind. Although M16A1 rifles had been used for mechanical training on the morning of the first training day (due to a reported shortage of M16A2 rifles), 82.4% of soldiers indicated on the survey's Question 40C that they had last qualified with M16A2 rifles (n = 216). Thus, unfamiliarity with the M16A2 rifle probably did not constrain overall company performance to any great extent.

M193 ball ammunition was used during M16A2 rifle zeroing and later qualification. A soldier's performance was defined as the number of rounds fired to meet a zeroing criterion (i.e., 5 of the last 6 rounds fired had to hit within a 4-cm circle on the zeroing target's scaled E-type silhouette). A greater number of rounds fired in meeting the zeroing criterion denoted lower, and more inconsistent, performance. The actual zeroing targets of 206 soldiers were obtained and bullet holes were counted to verify performance.

In order to meet the zeroing performance standard, soldiers had to meet the zeroing criterion without firing more than 18 rounds. The best possible zeroing score was 6 rounds. The NCOIC

¹The approximate t statistic, or t', is reported when equality of variances could not be assumed. In such cases, degrees of freedom were computed using the Satterthwaite approximation (see SAS Institute Inc., 1987).

of the range estimated that 70% of the soldiers in other IRR companies were able to meet the 18round zeroing standard. He further recalled that only 3 soldiers in these other companies failed to meet the zeroing criterion before departing the range, even though they fired as many as 120 rounds. Scores in the observed company ranged from 6 to 40 rounds (M = 14.35, SD = 4.77). The zeroing standard was met by 87.9% of these soldiers, and all met the zeroing criterion before departing the range. In comparison with the zeroing performance of initial entry training soldiers (see U.S. Army Infantry Board, 1986), the performance of IRR soldiers was vastly superior.

The zeroing performance measure appeared to suffer from some of the same problems as the SAW 10-meter performance measure, but to a lesser extent. Because these IRR soldiers had all received rifle marksmanship training in the relatively recent past, their zeroing scores tended to be fairly similar. Nevertheless, zeroing performance was found to be somewhat related to later rifle marksmanship qualification performance. Those soldiers meeting the 18-round zeroing standard obtained a higher number of hits during qualification (M = 26.82) than those failing to meet the zeroing standard (M = 22.80), t'(26.7) = 1.99, p = .0571. Actually, the 4-cm zeroing criterion is relatively difficult to meet. In terms of the marksmanship skill needed to meet this criterion, it equates to an ability to hit within 10 inches of the center of 5 out of 6 targets at 300 meters, without time limits and wind (only 3 of 40 targets are at distances as great as 300 meters during qualification).

M16A2 Rifle Marksmanship Qualification

On the afternoon of the sixth training day, M16A2 rifle marksmanship qualification was conducted on a standard record fire range equipped with the Remote Electronic Target System (RETS), which provided automated scoring. The weather was clear and cool, with a moderate half-value wind. During rifle qualification, soldiers engage 40 E-type or F-type silhouette targets at distances between 50 and 300 meters (see Department of the Army, 1989). A minimum score of 23 hits is required for qualification. In addition to the marksmanship skills needed for zeroing, rifle qualification requires soldiers to demonstrate an ability to detect targets, to react quickly under time pressure, to fire from an unsupported position, and to make aiming adjustments for the ballistic effects of wind and gravity at various target distances.

The qualification scores of 204 soldiers in the observed company were obtained from RETS computer printouts. First-attempt scores ranged from 4 to 39 hits (M = 26.33, SD = 6.82), with 75.5% meeting the minimum qualification standard. After three additional qualification attempts, only four soldiers remained unqualified. This level of qualification performance appears equal to that achieved by soldiers in active units, when scores were obtained under similar conditions (see U.S. Army Infantry Board, 1988b). As demonstrated in the later training performance analysis, rifle qualification scores and APFT scores were the most differentiating performance measures used. Compared to the three other performance measures, the rifle qualification and APFT measures involved highly standardized test and scoring procedures, moderate levels of task difficulty (neither too easy nor too difficult), and high levels of comprehensiveness (both measured a variety of skills).

Attitudinal Measures

This section describes the five attitudinal measures used in the training performance analysis, each of which related to a specific item on the IRR survey (Terry et al., 1992). These items were selected for analysis because they involved either perceived training needs, perceived combat readiness, or preferences for a combat zone assignment. Company-wide descriptive statistics are

presented, as are comparable statistics based on the overall IRR infantry sample (n = 2,641) of Terry et al. (1992), which included surveyed soldiers from the observed company (n = 231). Treating survey responses as interval-level measurement data, lower scores denote more positive attitudes.

Amount of Training Needed for an Active Duty Assignment

This measure was based on the survey's Question 43, which asked soldiers how much training they felt they would need to assume their active duty assignments. This question had a 3-point response scale ranging from "none, I'm ready now" (1) to "I need a lot more of some training" (3). Because the survey was administered to soldiers in the observed company on their first training day, their actual active duty assignments were unknown at the time. Although some soldiers may not have understood the extent of the training they would be receiving at Fort Benning, many already had formed accurate impressions, as they either had seen a training schedule or had talked to soldiers in other IRR training companies.

Soldiers in the observed company (n = 227) reported slightly less training needed for an active duty assignment than soldiers in the overall IRR infantry sample (n = 2,566). The average score in the observed company was 1.73 (SD = 0.69), compared with an average score of 1.85 (SD = 0.72) in the overall sample. These average scores were close to the midpoint of the response scale, which was "I need a little more of some training" (2). In the observed company, 41.0% of the soldiers reported no additional training was needed for an active duty assignment, compared with only 34.5% in the overall sample.

Amount of Training Needed for Combat

This measure was based on Question 44, which asked soldiers how much training they felt they would need if called to a combat situation. This question had a 3-point response scale ranging from "none, I'm ready now" (1) to "I need a lot more of some training" (3). Observed soldiers (n = 226) and soldiers in the overall infantry sample (n = 2,558) reported similar amounts of training needed for combat. The average score in the observed company was 2.06 (SD = 0.73), and the average score in the overall sample was 2.11 (SD = 0.72). These mean scores were very near the midpoint of the response scale, which was "I need a little more of some training" (2). In the observed company, 23.5% of the soldiers reported no additional training was needed for combat, compared with 20.8% in the overall sample. Not unexpectedly, soldiers in both samples reported slightly more training needed for combat than for an active duty assignment.

Physical Readiness for Combat

This measure was based on Question 35, which asked soldiers if they thought they were in tough enough physical condition for going into combat. This question had a 3-point response scale consisting of yes (1), no (2), and undecided (3). For scoring purposes, the second and third points of the response scale were reversed, so that undecided responses fell between yes and no responses. Observed soldiers (n = 230) and soldiers in the overall sample (n = 2,606) reported similar levels of physical readiness for combat. The mean physical readiness score in the observed company was 1.92 (SD = 0.91), and the mean score in the overall sample was 1.97 (SD = 0.89). These scores were very near the midpoint of the response scale, which was "undecided (not sure)" after the reversal. In the observed company, 46.1% of the soldiers reported they were in tough enough physical condition for combat, compared with 41.6% in the overall sample. Physical readiness attitudes were found to be related to APFT performance in the observed company. Soldiers who reported they were in tough enough physical condition for combat (n = 100) averaged 205.13 total points on the APFT, those who were undecided (n = 33) averaged 188.15 points, and those who reported they were not in tough enough condition (n = 75) averaged 181.93 points, F(2, 205) = 7.46, p = .0007. Using a Scheffe test (with p < .05) to further analyze this effect, it was found that soldiers who reported they were in tough enough condition for combat scored significantly higher on the APFT than soldiers who reported they were not in tough enough condition. However, the APFT performance of undecided soldiers did not differ significantly from the APFT performance of the other two groups.

Overall Readiness for Combat

This measure was based on Question 53, which asked soldiers if they would feel ready if they were to go into a combat situation. This question had a 5-point response scale ranging from "yes, I am sure I am ready" (1) to "no, I am sure I am not ready" (5). Observed soldiers (n = 231) reported slightly more readiness than soldiers in the overall sample (n = 2,604). The mean readiness score in the observed company was 2.57 (SD = 1.35), compared with a mean score of 2.70 (SD = 1.33) in the overall sample. These scores fell between the second and third points of the response scale, though they were closer to the midpoint, which was "I am not sure" (3). In the observed company, 25.1% of the soldiers reported they were sure they were ready for combat, compared with 21.3% in the overall sample.

Preference for a Combat Zone Assignment

This measure was based on Question 52, which asked soldiers how they would feel about being assigned to a combat zone. This question had a 5-point response scale ranging from "I strongly want to go" (1) to "I strongly do not want to go" (5). Observed soldiers (n = 231) and soldiers in the overall sample (n = 2,597) reported similar combat preferences. The mean preference score in the observed company was 3.07 (SD = 1.43), and the mean score in the overall sample was 3.08 (SD = 1.39). These scores were very near the response scale's midpoint, which was "I am uncertain" (3). In the observed company, 14.7% of the soldiers reported they strongly wanted to go to combat, compared with 14.1% in the overall sample. In both samples, combat preference attitudes tended to be more negative than combat readiness attitudes, as one would expect.

Analysis and Interpretation of Training Performance

The training performance analysis consisted of separate examinations of seven training issues, or variables, to determine if they had any apparent impact on the training performance and attitudes of soldiers in the observed company. These training issues are presented individually, in descending order of their demonstrated importance to performance and attitudes.

Recent Active Component Experience

From informal conversation with soldiers and from their written comments on the IRR survey, it became apparent by the second training day that most did not think refresher training in basic (i.e., Skill Level 1) tasks was necessary. In contrast, a distinct minority of soldiers voiced their appreciation of such training, because they typically lacked any recent Active Component experience. In order to determine if these subjective reports had merit, the training performance

and attitudes of soldiers having recent Active Component experience were compared to the performance and attitudes of those lacking such experience.

The presence or absence of recent Active Component experience was determined from survey responses to Questions 17 and 18 (n = 231). Because they reported an Active Component unit assignment immediately prior to their IRR service, 201 soldiers were considered to have recent Active Component experience (87%). The remaining 30 soldiers did not appear to have such experience (13%). These soldiers reported either that they had recent Reserve Component experience combined with earlier Active Component experience (n = 11), or that they had not been assigned to any unit after initial entry training (n = 4).

Mean performance and attitude scores of soldiers with and without recent Active Component experience are presented in Table 1. On each of the five performance measures, soldiers with recent Active Component experience obtained better mean scores than soldiers without such experience (lower zeroing scores denote better zeroing performance). These performance differences were statistically significant on the APFT (p < .05) and on M16A2 rifle qualification (p < .01). On four of the five attitudinal measures, soldiers with recent Active Component experience had more positive mean scores than soldiers without such experience (lower attitudes). Soldiers with recent Active Component experience felt significantly lower amounts of training were needed to assume an active duty assignment (p < .01). They also felt that significantly lower amounts of training were needed for combat (p < .05).

Soldiers with and without recent Active Component experience also were compared in terms of their ability to meet minimum performance standards (on the four measures that had existing standards). Within each experience group, the percentage of soldiers that met each standard is presented in Table 2. On all performance measures, a greater percentage of soldiers were able to meet minimum standards in the group with recent Active Component experience. These differences in percentages between experience groups were statistically significant in the case of APFT performance (p < .01) and rifle qualification performance (p < .05).

Generally, soldiers with recent Active Component experience performed better and had more positive attitudes than soldiers without such experience. On average, soldiers with recent Active Component experience scored about 30 points higher on the APFT, hit 2 more targets on the SAW 10-meter firing exercise, zeroed their rifle in 2 fewer rounds, and hit 5 more targets during their first attempt at rifle qualification. They also felt they needed less training, either to prepare for an active duty assignment or to prepare for combat. Although these findings are based on a relatively small sample, particularly in the case of soldiers without recent Active Component experience, they are entirely consistent with the finding of Wisher et al. (1991) that skill retention was higher for soldiers who entered the IRR directly from an Active Component unit assignment. In terms of their rifle marksmanship qualification performance, IRR soldiers with recent Active Component experience performed as well as soldiers in Active Component units (see U.S. Army Infantry Board, 1988b), though IRR soldiers without recent Active Component experience performed as well soldiers in Reserve Component units (see U.S. Army Infantry Board, 1988a). In summary, it appears that soldiers without recent Active Component experience would be more receptive to basic skills refresher training during mobilization, given their relatively lower levels of performance, their generally less positive attitudes, and given the informal verbal and written comments provided by some of these soldiers as training began.

A Comparison of the Mean Performance and Attitude Scores of Soldiers With and Without
Recent Active Component Experience

	Cor		t Active t Experier				
	Y	es	<u>No</u>				
······	М	n	M	n	t or t'	df	р
Performance Measures							
APFT total points	197.70	185	167.21	24	2.74	26.3	.0108
SAW 10-m firing hits	26.69	163	25.09	22	1.56	183.0	.1208
SAW night firing hits	3.60	98	3.33	15	0.59	111.0	.5559
Rifle zeroing rounds	13.97	176	15.90	21	-1.19	21.6	.2452
Rifle qualification hits	26.91	175	22.40	20	2.95	193.0	.0036
Attitudinal Measures							
Training for active duty	1.67	198	2.10	29	-3.22	225.0	.0015
Training for combat	2.02	197	2.38	29	-2.55	224.0	.0116
Physical combat readiness	1.89	200	2.10	30	-1.17	228.0	.2416
Overall combat readiness	2.51	201	3.00	30	-1.87	229.0	.0626
Preference for combat	3.08	201	3.03	30	0.17	229.0	.8688

Recent Active Component Experience										
	Yes No)						
Measure	%	n	%	n	x ²	df	<i>p</i>			
APFT total points	55.14	185	20.83	24	10.00	1	.002			
push-up points	86.84	190	48.15	27	24.01	1	.000			
sit-up points	79.06	191	46.15	26	13.25	1	.000			
2-mile run points	66.67	186	40.00	25	6.76	1	.009			
SAW 10-m firing hits	90.80	163	81.82	22	1.70	1	.193			
Rifle zeroing rounds	90.34	176	80.95	21	1.74	1	.188			
Rifle qualification hits	78.29	175	55.00	20	5.32	1	.021			

Percentage of Soldiers With and Without Recent Active Component Experience That Met Minimum Standards on Four Performance Measures

Recency of Training

Two methods of estimating training recency were used in this analysis, which examined the performance differences between soldiers who were more recently trained and those who were less recently trained. Initially, self-reported length of service in the IRR was used to estimate training recency in months (Questions 17E, 18E, and 20 on the IRR survey). Because Wisher et al. (1991) found that weapon qualification skills decayed mostly after 10 months, the training performance and attitudes of soldiers with less than 10 months of IRR service (n = 160) were compared to the performance and attitudes of soldiers with 10 or more months of IRR service (n = 61). The results of this comparison are presented in Table 3.

No statistically significant (p < .05) performance differences were found between soldiers thought to be trained more recently (IRR service < 10 months) and those thought to be trained less recently (IRR service ≥ 10 months), as the mean performance scores of these two groups were highly similar. However, more positive attitudes were generally found in the group reporting lesser lengths of IRR service. This group felt significantly less training was needed in preparation for combat (p < .05). They also felt less training was needed in preparation for an active duty assignment than soldiers reporting greater lengths of IRR service. This latter difference approached statistical significance (p < .10).

A Comparison of the Mean Performance and Attitude Scores of Soldiers Reporting Lesser and Greater Lengths of IRR Service

Length of IRR Service										
	<u>< 10 m</u>	<u>onths</u>	<u>≥ 10 mo</u>	≥ 10 months						
	М	n	M	n	<i>t</i> or <i>t'</i>	df	p			
Performance Measures										
APFT total points	194.03	145	197.41	56	0.46	80.9	.6493			
SAW 10-m firing hits	26.64	129	26.24	49	-0.51	176.0	.6117			
SAW night firing hits	3.31	73	4.06	35	1.94	49.0	.0585			
Rifle zeroing rounds	14.09	135	.4.79	56	0.95	189.0	.3415			
Rifle qualification hits	26.88	133	25.67	57	-1.16	188.0	.2477			
Attitudinal Measures										
Training for active duty	1.65	158	1.85	59	1.90	215.0	.0583			
Training for combat	1.94	156	2.27	60	3.00	214.0	.0030			
Physical combat readiness	1.87	159	1.95	61	0.60	218.0	.5487			
Overall combat readiness	2.45	150	2.64	61	0.91	219.0	.3627			
Preference for combat	3.04	160	2.93	61	-0.51	219.0	.6098			

As recognized by Wisher et al. (1991), length of IRR service is an imperfect estimate of training recency, because it does not adequately determine when a soldier last received training on a particular task. For this reason, a second approach to the estimation of training recency was used. This approach used additional IRR survey data to more accurately determine training recency or training frequency, in terms of rifle marksmanship and physical fitness skills.

Question 40 asked soldiers how long it had been since they last qualified with a service rifle. Responses to this question were used to compare the observed rifle qualification performance of soldiers who had qualified during the past year (n = 142), those who last qualified between one and two years ago (n = 37), and those who last qualified more than two years ago (n = 25). Soldiers who had qualified during the past year averaged 27.10 hits on the observed qualification, those who last qualified between one and two years ago averaged 26.19 hits, and those who last qualified more than two years ago averaged 22.20 hits, F(2, 201) = 5.76, p = .0037. Using a Scheffe test (with p < .05) to further analyze this effect, it was found that soldiers who last qualified more than two years ago had significantly lower qualification performance than soldiers in either of the other two groups.

Question 31A asked soldiers how often they exercised. Soldiers who reported they exercised daily averaged 207.88 total points on the APFT (n = 25). Similarly, those who exercised several times a week averaged 206.27 points (n = 62), those who exercised once a week averaged 193.77 points (n = 39), and those who exercised less than once a week averaged 181.27 points (n = 83), F(3, 205) = 5.66, p = .001. Using a Scheffe test (with p < .05) to further analyze this effect, it was found that soldiers who exercised less than once a week. Additionally, greater exercise frequency was found to be associated with more positive attitudes about physical readiness for combat, F(3, 226) = 3.76, p = .0116. Using a Scheffe test (with p < .05) to analyze this effect, it was found that soldiers who exercised less than once a week. Additionally, greater exercise frequency was found to be associated with more positive attitudes about physical readiness for combat, F(3, 226) = 3.76, p = .0116. Using a Scheffe test (with p < .05) to analyze this effect, it was found that soldiers who exercised less than once a week (M = 2.13).

APFT performance also was related to particular kinds of exercise activities. For example, the push-up scores of soldiers who reported on Question 31E that they regularly trained with weights (n = 95) were compared to the push-up scores of soldiers who did not report regular weight training (n = 121). Those who regularly trained with weights scored significantly higher (M = 72.37) than those who did not (M = 63.88), t(214) = -4.71, p < .0001. Similarly, the 2-mile run scores of those who reported on Question 31C that they regularly ran (n = 54) were compared to the 2-mile run scores of those who did not report regular running (n = 157). Those who regularly ran scored significantly higher (M = 69.69) than those who did not (M = 58.34), t(209) = -3.09, p = .0023.

In summary, some evidence exists that soldiers who were more recently trained performed better and had more positive attitudes than soldiers who were less recently trained. Although self-reported length of IRR service was found to be unrelated to training performance, more accurate estimates of training recency, or recent training frequency, were significantly related to performance. In the case of rifle marksmanship performance, for example, length of IRR service was unrelated to qualification scores (n = 190), r = -.01, p = .924. However, the qualification scores of these soldiers were significantly related to the self-reported number of months elapsing since their last qualification (r = -.22, p = .0033), indicating that higher qualification scores were associated with more recent qualification experience (n = 173). As one would expect, length of IRR service was significantly related to qualification recency (r = .46, p = .0001), indicating that soldiers with more IRR service prior to mobilization tended to report less recent qualification experience (n = 196).

General Aptitude

Believing that soldiers having a higher general aptitude might perform better in training, an analysis was performed using the ASVAB's General Technical (GT) aptitude area composite score as a measure of general aptitude. From the systematic personnel records sample of Terry et al. (1992), the GT scores of 42 soldiers in the observed company were identified. These scores ranged from 84 to 126 (M = 108.83, SD = 11.71), based on ASVAB administration dates that varied from 1983 to 1989. In the analysis of general aptitude, the training performance and attitudes of soldiers with lower GT scores (GT < 110) were compared to the performance and attitudes of soldiers with higher GT scores (GT > 110). The results of this analysis are presented in Table 4.

Table 4

	Lower		<u> </u>				
	<u> </u>	n	М	n	<i>t</i> or <i>t'</i>	df	р
Performance Measures							
APFT total points	186.60	20	195.19	21	-0.64	39.0	.5230
SAW 10-m firing hits	26.22	18	27.33	21	-0.81	37.0	.4228
SAW night firing hits	3.38	13	3.80	10	-0.79	21.0	.4374
Rifle zeroing rounds	16.16	19	13.42	19	1.47	24.5	.1553
Rifle qualification hits	22.84	19	28.74	19	-2.60	36.0	.0134
Attitudinal Measures							
Training for active duty	1.60	20	1.71	21	-0.50	39.0	.6217
Training for combat	1.95	20	2.05	20	-0.40	38.0	.6923
Physical combat readiness	1.75	20	1.90	21	-0.57	39.0	.5726
Overall combat readiness	2.70	20	2.36	22	0.76	40.0	.4495
Preference for combat	3.45	20	3.27	22	0.41	40.0	.6820

A Comparison of the Mean Performance and Attitude Scores of Soldiers With Lower and Higher Levels of General Technical Aptitude Soldiers having higher GT scores performed better than soldiers having lower GT scores on every performance measure. With the exception of rifle qualification performance, where soldiers having higher GT scores obtained a significantly greater number of hits (p < .05), mean performance differences tended to be small. No attitudinal differences between the two aptitude groups were found.²

Although the sample sizes were too small to form any definitive conclusions, soldiers with higher GT scores did tend to perform slightly better than soldiers with lower GT scores. These findings are somewhat in agreement with those of Wisher et al. (1991), who used the AFQT score as a measure of aptitude for learning. AFQT and GT scores are similar conceptually, as both have verbal and arithmetic reasoning components. Although Wisher et al. (1991) found AFQT scores to be strong predictors of performance on written diagnostic and certification tests, they concluded that AFQT scores "had essentially no predictive value for target scores during weapons qualification" (p. 16). However, they also reported that AFQT scores were positively correlated with weapons firing performance on four separate tests (.05 < r < .15), with a significant result in one of these cases (p < .05). In the present analysis, GT scores were found to be more strongly correlated with firing performance (.13 < r < .24), though none of these relationships were statistically significant.

Combat Training Center Experience

The survey's Question 38 was used to determine whether or not a soldier had Combat Training Center experience, either at the National Training Center (NTC) or the Joint Readiness Training Center (JRTC). In the observed company, 93 soldiers reported they had Combat Training Center experience and 135 soldiers reported they lacked such experience. Because Combat Training Centers focus on collective training and evaluation at the unit level, individual performance differences at the basic skill level were not expected to be found during IRR mobilization training. However, it was thought that soldiers who had previously trained with units at the NTC or JRTC might have more positive attitudes (i.e., less perceived needs for training and higher perceived readiness) than soldiers who had not received such training.

A comparison of mean performance and attitude scores of soldiers with and without Combat Training Center experience is presented in Table 5. As expected, no performance differences between the two groups were found. However, soldiers with Combat Training Center experience consistently had more positive attitudes than soldiers without such experience. Soldiers with Combat Training Center experience reported significantly lower needs for training in preparation for an active duty assignment (p < .01) and significantly stronger preferences for a combat zone assignment (p < .001). Differences in perceived physical readiness and overall combat Training Center share had a positive influence on the training-related and combat-related attitudes of soldiers who have trained there.

²A similar analysis was conducted with the Combat (CO) aptitude area composite score (n = 42), as it is used to qualify soldiers for Infantry MOSs (CMF 11). No significant performance or attitudinal differences were found between soldiers with lower and higher CO scores. Soldiers with higher CO aptitude performed slightly better on 4 of 5 performance measures, though they had slightly more negative attitudes on 4 of 5 attitudinal measures.

	<u>Y</u> e	<u>es</u>	No				
<u></u>	М	n	M	n	t	df	р
Performance Measures							
APFT total points	199.39	85	191.22	121	1.40	204	.1616
SAW 10-m firing hits	26.59	76	26.30	106	0.43	180	.6696
SAW night firing hits	3.72	39	3.49	71	0.68	108	.4951
Rifle zeroing rounds	14.53	<i>83</i>	13.86	111	0.98	192	.3261
Rifle qualification hits	26.88	83	26.25	109	0.65	190	.5134
Attitudinal Measures							
Training for active duty	1.58	91	1.83	133	-2.64	222	.0089
Training for combat	1.97	91	2.13	132	-1.63	221	.1052
Physical combat readiness	1.78	93	2.01	134	-1.88	225	.0620
Overall combat readiness	2.39	<i>93</i>	2.70	135	-1.74	226	.0840
Preference for combat	2.69	<i>93</i>	3.36	135	-3.55	226	.000

A Comparison of the Mean Performance and Attitude Scores of Soldiers With and Without Combat Training Center Experience

Combat Experience

Because it was thought that soldiers with actual combat experience might demonstrate different combat-related and training-related attitudes than soldiers without combat experience, an analysis was conducted using the CIB as an operational definition of combat experience. From the systematic personnel records sample of Terry et al. (1992), 16 soldiers in the observed company were identified as having the CIB and 32 soldiers were identified as not having the CIB (from MPRJ documents).

A comparison of mean performance and attitude scores of soldiers with and without combat experience is presented in Table 6. Soldiers with combat experience performed somewhat better on four of the five measures than soldiers without combat experience, though none of the differences were statistically significant. In terms of their attitudes, soldiers with combat experience reported significantly lower needs for training in preparation for an active duty assignment (p < .05). Results were mixed on the other attitudinal measures. Though no significant differences were found, soldiers with combat experience reported lower training needs in preparation for combat, slightly higher physical combat readiness, slightly lower overall combat readiness, and a weaker preference for a combat assignment than soldiers without combat experience.

Not apparent from this analysis of mean scores was the finding that soldiers without combat experience demonstrated noticeably greater uncertainty in their combat-related attitudes than soldiers with combat experience. In the group without combat experience, 31.3% were undecided about their physical readiness for combat, 34.4% were not sure of their overall combat readiness, and 25% were uncertain about preferences for a combat assignment. In the group with combat experience, only 13.3% were undecided about their physical readiness, only 12.5% were not sure of their overall combat readiness, and none (0%) were uncertain about preferences for a combat assignment.

Although sample sizes were again too small to form definitive conclusions, the results of this analysis suggest that soldiers with combat experience (recently gained for most) tend to perform somewhat better during basic skills refresher training than soldiers without combat experience. Further, these results suggest that soldiers with combat experience have lower perceived training needs and have less uncertainty in their combat-related attitudes than soldiers without combat experience.

Prior Skill Proficiency

Wisher et al. (1991) found that prior SQT performance was the strongest predictor of skill and knowledge retention during IRR mobilization training. Unfortunately, a similar analysis could not be performed in the present investigation, as too few SQT scores were found in the observed company's personnel records sample. However, an analysis was conducted using another indicator of prior skill proficiency from the personnel records sample of Terry et al. (1992). In this analysis, the performance and attitudes of soldiers who had been awarded the EIB (n = 7) were compared to the performance and attitudes of soldiers who had not been awarded the EIB (n = 40).³ The award of the EIB indicates that an infantryman has demonstrated a particularly high level of proficiency in his individual skills near the time of the award. Among other EIB requirements, an

³The percentage of soldiers having the EIB in the observed company's sample (14.9%) was similar to the EIB percentage in the overall personnel records sample (14.4%).

A Comparison of the Mean Performance and Attitude Scores of Soldiers With and Without Combat Experience

	Co	mbat	Experienc	e			
	<u>Yes</u>		<u>No</u>				
	M	n	M	n	t	df	<i>p</i>
Performance Measures							
APFT total points	196.40	15	186.25	32	-0.80	45	.4268
SAW 10-m firing hits	28.07	14	26.28	29	-1.35	41	.1856
SAW night firing hits	3.57	7	3.68	19	0.18	24	.8581
Rifle zeroing rounds	14.50	12	14.94	31	0.22	41	.8268
Rifle qualification hits	28.08	12	24.45	31	-1.38	41	.1749
Attitudinal Measures							
Training for active duty	1.40	15	1.87	32	2.12	45	.0397
Training for combat	1.93	15	2.13	31	0.77	44	.4429
Physical combat readiness	1.80	15	1.87	32	0.28	45	.7837
Overall combat readiness	2.69	16	2.53	32	-0.36	46	.7160
Preference for combat	3.56	16	3.28	32	-0.65	46	.5201

infantryman must obtain at least 36 hits during rifle qualification and must obtain at least 70 points on each APFT event. However, infantrymen who have not been awarded the EIB do not necessarily have a low level of skill proficiency. In fact, their levels of skill proficiency can vary widely.

A comparison of mean performance and attitude scores of infantrymen with and without the EIB award is presented in Table 7. No significant performance or attitudinal differences between the two groups were found. Infantrymen who had been awarded the EIB tended to perform slightly better on most measures, though they also tended to report slightly more negative attitudes. Given the requirements for awarding the EIB, it would appear that some decay has occurred in the physical fitness and rifle marksmanship skills of soldiers in the EIB group.

In summary, the results of this analysis were inconclusive. Compared with the SQT, which is a written test, EIB requirements should have been more closely related to performance on the actual measures examined in this analysis. However, one should not conclude that prior skill proficiency has little influence on performance during mobilization training, given the findings of Wisher et al. (1991). There are at least three plausible reasons for the inconclusive results found in this analysis. First, sample sizes were woefully small. In particular, it is not known how representative the seven observed EIB infantrymen were of EIB infantrymen in general. Second, the EIB actually may be an imprecise indicator of prior skill proficiency. Though the EIB conveys some information about the prior skill proficiency of those who haven't earned it. Third, EIB recency was not addressed in this analysis, because award dates were not recorded during the sampling of personnel records. Conceptually, it is possible that only those infantrymen who recently have been awarded the EIB will perform substantially better during mobilization training, as they would have more recently demonstrated a high level of skill proficiency.

COHORT Unit Experience

Some Fort Benning leaders had a particular interest in any evidence pertaining to the effects of COHORT unit assignments on subsequent soldier performance. For this reason, an analysis was conducted that compared the performance and attitudes of soldiers with COHORT unit experience to the performance and attitudes of soldiers without COHORT unit experience. In the observed company, 71 soldiers reported having COHORT unit experience and 156 soldiers reported having no COHORT unit experience on the survey's Question 47A.

A comparison of mean performance and attitude scores of soldiers with and without COHORT unit experience is presented in Table 8. Although no significant performance or attitudinal differences between the two groups were found, soldiers with COHORT unit experience tended to report more positive training-related attitudes and less positive combat-related attitudes. On one attitudinal measure, soldiers with COHORT unit experience reported they needed comparatively less training in preparation for an active duty assignment than soldiers without COHORT unit experience. This difference approached statistical significance (p < .10). It is probably not surprising that COHORT unit experience was found to be unrelated to performance in this analysis, as no measures of team or collective training performance were examined. However, Terry et al. (1992) found that soldiers with COHORT unit experience had a slightly greater tendency to prefer reassignment with members of their former units.

A Comparison of the Mean Performance and Attitude Scores of Soldiers Who Have and Who Have Not Been Awarded the EIB

		E	EIB				
	Yes		<u> </u>	0			
	М	n	<i>M</i>	n	t	df	р
Performance Measures							
APFT total points	194.14	7	189.26	39	-0.29	44	.772
SAW 10-m firing hits	27.86	7	26.66	35	-0.69	40	.495
SAW night firing hits	3.80	5	3.62	21	-0.26	24	.798
Rifle zeroing rounds	15.86	7	14.61	36	-0.52	41	.605
Rifle qualification hits	27.43	7	25.08	36	-0.72	41	.474
Attitudinal Measures							
Training for active duty	2.00	6	1.68	40	-0.99	44	.327
Training for combat	2.40	5	2.00	40	-1.06	43	.294
Physical combat readiness	2.14	7	1.77	39	-1.07	44	.290
Overall combat readiness	2.43	7	2.55	40	0.22	45	.828
Preference for combat	3.57	7	3.30	40	-0.47	45	.641

A Comparison of the Mean Performance and Attitude Scores of Soldiers With and Without	
COHORT Unit Experience	

	COHORT Unit Experience						
	Yes		<u>No</u>				
	М	<u>n</u>	М	n	<i>t</i> or <i>t'</i>	df	р
Performance Measures							
APFT total points	195.95	66	194.44	139	0.27	158.5	.7913
SAW 10-m firing hits	26.07	58	26.66	123	-0.81	179.0	.4194
SAW night firing hits	3.27	37	3.71	76	-1.35	111.0	.1806
Rifle zeroing rounds	14.30	60	14.14	133	0.22	191.0	.8287
Rifle qualification hits	27.32	59	26.04	132	1.24	189.0	.2180
Attitudinal Measures							
Training for active duty	1.60	70	1.79	154	-1.95	222.0	.0528
Training for combat	1.97	69	2.10	153	-1.28	220.0	.2026
Physical combat readiness	1.99	70	1.88	156	0.77	224.0	.4425
Overall combat readiness	2.56	71	2.55	156	0.06	225.0	.9500
Preference for combat	3.28	71	2.98	156	1.48	225.0	.1400
A Supplementary Analysis of Attitudinal Variation

To better explore the relationships among the seven training issues and the five attitudinal measures discussed previously, a supplementary multivariate analysis was performed using the survey and personnel records samples of Terry et al. (1992). Complete data on 12 variables (7 independent training variables and 5 dependent attitudinal variables) were obtained from 222 soldiers.⁴ Though performance variables were not a part of this analysis, because the samples of Terry et al. (1992) did not include data on actual performance, it was thought that a multivariate examination of training and attitudinal variables with a more complete sample might offer additional insight, particularly in those areas of the training performance analysis that were limited by extremely small samples (i.e., general aptitude, combat experience, and prior skill proficiency).

Relationships Among the Training Variables

Correlations among the seven training variables are presented in Table 9. As can be seen, soldiers with recent Active Component experience tended to have somewhat higher GT scores than soldiers without such experience. There also was a greater tendency among soldiers with recent Active Component experience to have had Combat Training Center experience and COHORT unit experience. Both COHORT unit experience and actual combat experience were associated with fewer months of IRR service. Soldiers with higher general aptitude were more likely to have an EIB, but less likely to have COHORT unit experience. It was rare to find soldiers who had been awarded both the EIB and CIP if a soldier had one of these awards, there was a lower probability that he had the other (most soldiers had neither award). Finally, COHORT unit experience was associated with both Corr at Training Center experience and actual combat experience. This latter finding represented the strongest relationship found among the training variables, and may partially explain why the observed company was over-represented in terms of both combat experience and COHORT unit experience.

Relationships Among the Attitudinal Measures

Correlations among the five attitudinal measures are presented in Table 10. As can be seen, the attitudinal measures were moderately correlated with one another, with an average intercorrelation of .52. Overall combat readiness was found to be most strongly related to other measures, with an average intercorrelation of .60. Preference for combat was least strongly related to other measures, with an average intercorrelation of .44. In general, these results suggest the five survey items were largely measuring similar attitudinal concepts.

⁴Of the 2,641 soldiers surveyed, 660 were selected for personnel records sampling. However, the MPRJs of only 431 soldiers were located and complete GT, CIB, and EIB data were found in only 285 cases. Finally, only 222 of these soldiers responded to all survey items of interest. Fortunately, the final sample did appear to be representative of the larger survey and personnel records samples, based on mean, standard deviation, and frequency distribution comparisons. The final sample included 37 soldiers from the observed company.

Table 9

Correlations Among Training Variables

Variable	1	2	3	4	5	6	7
1. Recent Active Component Experience	1.00						
2. Length of IRR Service (months)	08	1.00					
3. General Aptitude (GT score)	.29***	.01	1.00				
4. Combat Training Center Experience	.19**	10	.13	1.00			
5. Combat Experience (CIB)	.07	25***	09	- .06	1.00		
6. Prior Skill Proficiency (EIB)	.06	.02	.18**	- .01	14*	1.00	
7. COHORT Unit Experience	.16*	22***	22***	.15*	.34***	13	1.00

Note. N = 222. p < .05. p < .01. p < .001.

Table 10

Correlations Among Attitudinal Measures

Measure	1	2	3	4	5
1. Training for active duty	1.00				
2. Training for combat	.69	1.00			
3. Physical combat readiness	.41	.49	1.00		
4. Overall combat readiness	.54	.70	.57	1.00	
5. Preference for combat	.26	.44	.45	.60	1.00

Note. N = 222 and p = .0001 for all correlations.

Relationships Between Training and Attitudinal Variables

Correlations between the seven training variables and the five attitudinal measures are presented in Table 11. Combat Training Center experience was associated with more positive attitudes on all measures and it had a statistically significant correlation with four of the measures (p < .01). Similarly, recent Active Component experience was associated with more positive attitudes on all measures and it had a significant relationship with three measures (p < .05). A high level of prior skill proficiency, as denoted by the EIB, was associated with more positive attitudes on all measures, though it was significantly related only to overall combat readiness (p < .01).

Combat experience and COHORT unit experience were both significantly related to lower preferences for combat (p < .05). As combat experience and COHORT unit experience were found to be associated with one another (see Table 9), with two thirds of the CIB soldiers having COHORT unit experience, a two-way analysis of variance was performed to determine the relative influence of these two variables on combat preference attitudes. Only the main effect for combat experience was found to be significant, F(1, 218) = 7.77, p = .0058. Neither the main effect for

Table 11

Correlations Between Training and Attitudinal Variables

	Training for active duty	Training for combat	Physical combat readiness	Overall combat readiness	Preference for combat
Recent Active Component Exp.	23***	15 *	13*	12	08
Length of IRR Service (months)	.08	.08	.05	.06	09
General Aptitude (GT score)	12	.01	04	02	14 [*]
Combat Training Center Exp.	20**	23***	26***	27***	13
Combat Exp. (CIB)	11	07	.05	.00	.18**
Prior Skill Proficiency (EIB)	02	09	11	18**	08
COHORT Unit Experience	02	04	.03	.05	.13*

Note. N = 222.

p < .05. p < .01. p < .001.

COHORT unit experience nor the interaction were statistically significant (p = .2508 and p = .6219, respectively). Thus, it appears that actual combat experience has a more dominant role in the formation of preferences for a combat zone assignment.

In order to determine the relative contributions of the seven training variables to overall attitudinal variation, a stepwise multiple regression analysis was performed. Scores on the five attitudinal measures were initially standardized (i.e., converted to z scores) and then summed to create a single dependent attitudinal variable. The resulting stepwise analysis yielded a significant three-variable model composed of Combat Training Center experience, recent Active Component experience, and prior skill proficiency, F(3, 218) = 8.94, p = .0001. The multiple R associated with this three-variable model was .33, explaining 10.9% of the variance in overall attitudes (R^2).⁵ Combat Training Center experience had the strongest relationship with attitudes overall (partial $R^2 = 7.8\%$), followed by recent Active Component experience (partial $R^2 = 1.7\%$) and prior skill proficiency, and COHORT unit experience) explained little additional variation in the attitudes of soldiers.

Implications for Training Performance Analysis Findings

The results of the supplementary multivariate analysis were generally supportive of the training performance analysis findings of attitudinal differences in the observed company. In particular, both analyses found that Combat Training Center experience and recent Active Component experience were associated with more positive soldier attitudes concerning perceived needs for additional training, combat readiness, and preferences for a combat zone assignment. However, the two analyses yielded divergent results in several areas. In these areas, greater weight should be given to the results of the supplementary analysis, because it was based on a larger and more complete sample of soldiers.

In the training performance analysis, lesser lengths of IRR service were associated with more positive attitudes, general aptitude was unrelated to attitudes, and EIB awards were associated with slightly more negative attitudes. These particular findings were not supported by the results of the supplementary analysis, which found that length of IRR service was not significantly related to attitudes, that higher levels of general aptitude were associated with stronger combat preferences, and that EIB awards were actually associated with more positive attitudes (see Table 11).

Regarding the influence of combat experience on attitudes, both analyses yielded similar results. In the training performance analysis, IRR soldiers with combat experience reported significantly lower needs for training in preparation for an active duty assignment (p < .05). In the supplementary analysis, the relationship between these variables approached statistical significance (p < .10). In the training performance analysis, soldiers with combat experience also reported lower preferences for a combat zone assignment, though they were not significantly lower than those of soldiers without combat experience. However, the relationship between these variables was statistically significant in the supplementary analysis (p < .01). In the group with combat experience (n = 23), 52% reported they strongly did not want to go to a combat zone, compared with only 22% in the group without combat experience (n = 199). Finally, both analyses found less uncertainty in the combat-related attitudes of soldiers having combat experience. In the supplementary analysis,

⁵Adjusted for the number of training variables and the sample size, the multiple R fell to .31, explaining 9.7% of overall attitudinal variance.

19.1% of the soldiers without combat experience were undecided about their physical readiness for combat, 21.6% were not sure of their overall combat readiness, and 21.1% were uncertain about preferences for a combat zone assignment. In contrast, only 8.7% of the soldiers with combat experience reported uncertainty on each of the three combat-related attitudinal measures (comparative results in the observed company are presented on p. 20).

In the training performance analysis, higher general aptitude was associated with slightly better performance scores (see Table 4). However, the supplementary analysis also demonstrated that higher levels of general aptitude were associated with recent Active Component experience (see Table 9). Given that soldiers with recent Active Component experience tended to perform better than soldiers without such experience (see Table 1), it is entirely possible that some of the training performance differences originally attributed to the effects of general aptitude were actually influenced by the association of general aptitude with recent Active Component experience. Thus, the actual relationship between general aptitude and training performance is probably weaker than originally supposed.

Summary of Findings

With the exception of APFT performance, examined under less than ideal conditions, most IRR (RT12) infantrymen performed well during mobilization training, demonstrating little apparent decay in their basic skills. Although Wisher et al. (1991) found some evidence of skill decay among IRR soldiers, they also found decay to be less apparent among weapons qualification skills and among infantrymen. In the present analysis of training performance, skill retention was noticeably higher among those infantrymen with recent Active Component experience (i.e., infantrymen who entered the IRR directly from an Active Component unit assignment). These infantrymen, representing 87% of the observed company, performed better as a group and had lower perceived needs for additional training than infantrymen lacking such experience. Wisher et al. (1991) also found recent Active Component experience to be associated with higher levels of skill retention.

Consistent with conventional wisdom, infantrymen trained more recently or more frequently on particular tasks tended to perform those tasks better during mobilization. Although it was difficult to determine when infantrymen had last been trained on particular tasks (and even more difficult to determine their exact level of prior performance), infantrymen who reported more recent rifle qualification experience hit more targets during rifle qualification at the mobilization station. Similarly, infantrymen reporting more frequent physical training tended to score higher on the APFT. Length of service in the IRR (or conversely, time out of service) proved to be an imperfect estimate of training recency. Length of IRR service was generally unrelated to the performance and attitudes of RT12 infantrymen, although Wisher et al. (1991) found a stronger relationship in their analysis of performance across MOSs.

Infantrymen with higher levels of general aptitude (i.e., with higher GT scores) tended to perform slightly better than infantrymen with lower levels of general aptitude. Performance differences were most apparent during rifle qualification. Infantrymen with higher levels of general aptitude also reported stronger preferences for a combat zone assignment (i.e., they were less negative about a potential combat assignment). Although Wisher et al. (1991) found AFQT scores to be a strong predictor of written test performance, they found the relationship between AFQT ar 4 weapons qualification performance to be only weak, at best.

Infantrymen who had been awarded the EIB felt themselves to be more ready for combat than other infantrymen. Although they did not perform significantly better, perhaps due to a small and unrepresentative sample in the observed company, infantrymen with an EIB tended to have more positive training-related and combat-related attitudes than other infantrymen. To the extent the EIB and SQT both measure prior levels of skill, these findings are in partial agreement with those of Wisher et al. (1991), who found prior SQT performance to be strongly related to skill and knowledge retention during mobilization training.

The present analysis of IRR infantrymen examined three training, or experience, variables that have not been addressed in previous IRR research. First, soldiers with Combat Training Center experience (i.e., they had trained with units at either the NTC or JRTC) were found to have lower perceived training needs and higher perceived combat readiness. In fact, Combat Training Center experience was the single best predictor of training and combat attitudes during mobilization. Second, soldiers with actual combat experience (from Operation JUST CAUSE) also were found to have lower perceived training needs. However, they reported much lower preferences for a combat assignment and they were consistently less uncertain about their combat-related attitudes. Finally, COHORT unit experience was found to be generally unrelated to either performance or attitudes in this analysis, though no measures of team or collective training performance were examined.

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APPENDIX A

SCHEDULE OF TRAINING BY SUBJECT AND TASK

Day 1

Diagnostic Army Physical Fitness Test

M16A2 Rifle

Maintain rifle Perform function check Load/unload Correct malfunction

M203 Grenade Launcher

Maintain grenade launcher Identify 40-mm ammunition Perform function check Load/unload Correct malfunction

Day 2

Physical Training

First Aid

Clear object from throat Perform mouth-to-mouth resuscitation Apply dressing to head, chest, and abdominal wounds First aid for burns, heat injuries, and frostbite Evaluate a casualty Put on a field or pressure dressing Put on a tourniquet Prevent shock Splint a fracture

Day 3

Physical Training

Nuclear, Biological, and Chemical Training

Put on, wear, and store M17 protective mask Decontaminate skin and personal equipment Put on and wear mission-oriented protective posture (MOPP) gear Recognize and react to chemical or biological hazard Use M8 detector paper Use M9 detector paper Administer nerve agent antidote Maintain M17 protective mask React to nuclear hazard Exchange MOPP gear Drink water from canteen while wearing protective mask Use the latrine while in MOPP4

Day 4

M203 Grenade Launcher

Zero Engage targets (familiarization)

Physical Training

Day 5

Physical Training

M249 Squad Automatic Weapon

Perform operator maintenance Engage targets (10-meter firing exercise) Mount/dismount the AN/PVS-4 night vision device Engage targets using the AN/PVS-4 (night firing exercise)

Day 6

Physical Training

M16A2 Rifle

Zero Engage targets (qualification)

M72A2 Light Antitank Weapon (LAW)

Prepare for firing Restore to carrying configuration Perform misfire procedures

Day 7

Physical Training

Military Operations on Urbanized Terrain

Select hasty firing positions in urban terrain Techniques of movement in urban terrain Enter a building

Enter a two-story building:

Cross an open area Throw grappling hook/rope to second-story window Climb rope Roll through second-story window

Clear a building

Throw hand grenade through window with right hand Throw hand grenade through window with left hand

Prepare individual and crew-served weapons positions in urban terrain

Day 8

Physical Training

Individual Tactical Training

Move under direct fire Move over, through, and around an obstacle React to indirect fire Select temporary fighting position Camouflage self and individual equipment Clear field of fire Construct individual fighting position Practice noise, light, and litter discipline

M60 Machine Gun

Perform function check Load/unload Correct malfunction

Day 9

Battle Drills

React to contact Break contact React to ambush React to indirect fire React to chemical attack React to nuclear attack

Day 10

M136 (AT-4) LAW

Prepare for firing Restore to carrying configuration Perform misfire procedures Engage targets (sub-caliber firing exercise)

APPENDIX B

1. NAME:	
	LAST NAME, FIRST NAME, MI
2. SSN:	`
TRAINING	COMPANY:
ROSTER N	UMBER:

INDIVIDUAL READY RESERVE SURVEY

Your responses to this survey will become part of a body of data that will permit Fort Benning to study and report on its part of the operation of recalling, processing, and training Individual Ready Reserve (IRR) soldiers. Studying this operation will assist the Army in improving procedures in the future. A large recall of IRR such as this one is not a frequent occurrence. Consequently, there are few opportunities for lessons to be learned. Yours and others responses to this survey will be important sources of information about IRR soldiers in terms of background, attitudes, needs, and confidence. Your responses will provide one of the few views of IRR recall procedures we are likely to have. These are very important pieces of the total picture. Fort Benning's Commanding General and the Army Research Institute greatly appreciate your full and careful completion of this questionnaire.

PRIVACY ACT STATEMENT

Public Law 93-573, called the Privacy Act of 1974, requires that you be informed of the purpose and uses to be made of the information collected.

The Department of the Army may collect the information requested in this questionnaire under the authority of 10 United States Code 137. Providing information in this questionnaire is voluntary. Failure to respond to any particular questions will not result in any penalty.

The information collected in this questionnaire will be used solely for research purposes. Social Security Numbers and names are requested only for tracking and control purposes.

Your responses will be held in <u>strict confidence</u>. No one outside the research team will have access to individual data.

This personnel data collection form was developed for the U.S. Army Infantry Center by the U.S. Army Research Institute Fort Benning Field Unit pursuant to its research mission, as prescribed in AR 10-7. When identifiers are requested they are to be used for administrative and statistical control purposes only. Full confidentiality will be maintained in the processing of these data. To answer each question, please CIRCLE THE NUMBER OF THE CORRECT RESPONSE and/or FILL IN THE BLANK.

3.	Rank:
	1. PV1/PV2 2. PFC 3. SP4/CPL 4. SGT 5. SSG 6. SFC 7. 1SG/MSG 8. SGM/CSM 9. Other
4.	Year of Birth:
5.	Residence at time of recall:
	City: (5A) State: (5B)
6.	Marital Status:
	 married single divorced
7.	How many people depend upon you for financial support?
	 no one (I receive support.) self only self & others How many total? (7B)
8.	Civilian education (highest grade/diploma/degree attained):
	 never finished high school high school/GED some college college degree graduate work
9.	When you received your recall notice were you attending:
	 college trade or vocational school graduate school other

- If you were in school when recalled, were you using Montgomery Bill (GI Bill) benefits? 10.
 - 1. yes 2. no

11.	Do you expect any problems at home because of your absence? (Circle all that apply.)
	(11A) financial(11D) business/property(11B) family stress(11E) education(11C) employment(11F) other
	Please describe:
12.	Overall, how easy or difficult do you expect it to be for your spouse and/or others at home to manage in your absence?
	 fairly easy somewhat difficult very difficult don't know
13 A .	Current Primary MOS and Skill Level.
	1. 11B (Light) (13B) 1. Skill Level 1 2. 11B (Mech) 2. Skill Level 2 3. 11C 3. Skill Level 3 4. 11H 4. Skill Level 4 5. 11M 6. Other
14.	List any Secondary MOS
15.	List any prior MOS
16.	List any ASI (additional skill identifier)
17.	Last Active Duty assignment, if any: (17A) none (17B) Unit
	(17C) Duty position (17D) Location (17E) ETS date
18.	Last Reserve Component assignment, if any (other than IRR):
	(18A) none (18B) Unit
	(18C) Duty position (18D) Location (18E) ETS date

19.	How many total years/months U.S. Army experience do you have?
	active duty? (19A) years (19B) months reserve units? (19C) years (19D) months
19E.	Do you have experience in the U.S. Armed Services other than Army? 1. no 2. yes, Air Force 3. yes, Marines 4. yes, Navy 5. yes, Coast Guard
	If yes, how many total years/months non-Army military experience do you have?
	active duty? (19F)years (19G)months reserve units? (19H)years (19I)months
20.	How long have you been assigned to the IRR?
	(20A) years (20B) months
21.	Before you received your recall notice how long was your remaining service obligation in the IRR? (21A)years (21B) months
22.	Did you realize when you first enlisted that your contract was for a longer time (usually a total of 8 years) than your required Active Service? 1. yes 2. no
23.	Why did you leave the Active Army (or other service) or active participation in a Reserve or National Guard unit? Please mark only the reason that best describes your circumstance. If none applies, please mark "Other."
	 Involuntarily Chaptered out of active/reserve duty, medical problem. Involuntarily Chaptered out of active/reserve duty, non-medical. Chose to leave active/reserve duty to pursue education. Chose to leave active/reserve duty for personal/family reasons. Chose to leave active/reserve duty because I did not like it. Left my Reserve/National Guard unit because I moved to another location. Other, please explain.
24A.	Did your recall cause you to leave a civilian job?
	1. no 2. yes, Job Title (24B)
25A.	Will you have a loss of income during your recall compared with your civilian job pay?
	 yes, I will lose about (25B) \$ per month no, about the same no, I will be gaining income

- 26. After you left Active Duty, how did you feel about the Army?
 - 1. liked it very much
 - 2. liked it
 - 3. neither liked it nor disliked it
 - 4. disliked it
 - 5. disliked it very much
 - 6. not applicable, never was on active duty
- 27. How do you feel about being subject to recall under IRR status?
 - 1. very positive
 - 2. positive
 - 3. neutral
 - 4. negative
 - 5. very negative
- 28A. When you first received your orders from ARPERCEN, did they come to your correct current address?
 - 1. yes
 - 2. no
- 28B. Were the orders <u>accurate</u>?
 - 1. yes
 - 2. no

If not, what were the errors?

28C. Were the orders <u>adequate</u>, containing all the information you needed?

- 1. yes
- 2. no

If not, what additional information was needed?

28D. How many days were there between the day you received your orders and your report date?

- 29. After receiving your orders, was there any confusion concerning what was expected of you about the following? (Circle all that apply.)
 - 29A. no, there was no confusion
 - 29B. yes, reporting time
 - 29C. yes, reporting location
 - 29D. yes, transportation requirements
 - 29E. yes, family support requirements
 - 29F. yes, family support availability
 - 29G. yes, uniform/civilian attire

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29I. yes, information in response to questions

Comments:

30A. Did you call the telephone number on your orders for further information? 1. yes 2. no 30B. If you did call, how useful was the information you received? 1. quite useful 2. a little useful 3. a little useless 4. quite useless 5. not sure 30C. Did you have any other telephone contact regarding your orders? 1. yes 2. no With what agency? Topic/comments: 31A. How often do you exercise? 1. daily 2. several times a week 3. once a week 4. less than once a week 31B. Before you were recalled, how long was your typical exercise session? minutes long. If you exercise regularly, what type(s) of activities do you choose? (Circle all that apply.) 31C. running 31D. swimming 31E. weights 31F. team sports 31G. other 32. Do you think you are in good physical condition? 1. yes, very good 2. yes, fairly good 3. no 4. undecided (not sure)

- 33A. When did you last <u>pass</u> the APFT (before your recall)?
 - (date) _____ month _____ year
- 33B. Have you taken a PT test since you arrived at Fort Benning? 1. yes
 - 2. no
- 33C. If yes, what was your score?
- 34. If no, how confident are you that you could pass the APFT today?
 - 1. very confident
 - 2. confident
 - 3. not very confident
 - 4. not at all confident
- 35. Do you think that you are in tough enough physical condition for going into combat?

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1. 1.	
2. no	
3. undecided (not sure)	

- 36A. Have you had any military training since your last day of Active Duty?1. yes
 - 2. no

If yes, how long ago was this training? (36B) _____ months (36C) ____ years

- 37. If yes, this training was with what type of unit?
 - 1. Active Army (or other Active Service)
 - 2. Reserve or National Guard

Please give course title, topic(s) covered or type of exercise.

38. Have you ever trained with a unit at the National Training Center (NTC) or the Joint Readiness Training Center (JRTC)?
1. yes, NTC

- 2. yes, JRTC
- 3. yes, both
- 4. no

If yes, please list/describe your duty position(s) during these exercises

39. Have you ever been part of the opposing force (OPFOR) at NTC or JRTC?

- 1. yes, NTC
- 2. yes, JRTC
- 3. yes, both
- 4. no

40. How long ago did you last qualify with a service rifle?

- (40A) years (40B) months
- 40C. With what rifle did you last qualify?
 - 1. M14
 - 2. M16A1
 - 3. M16A2
 - 4. other, what?
- 40D. On what type of range did you qualify?
 - 1. indoor
 - 2. outdoor range with paper targets
 - 3. outdoor range with pop-up targets
 - 4. other, type?
- 40E. With what type of unit did you qualify?
 - 1. Active Army
 - 2. Reserve Component
- 40F. What was your last rifle qualification rating?
 - 1. expert
 - 2. sharpshooter
 - 3. marksman
 - 4. unqualified
 - 5. unknown

41A. Have you qualified with other military weapons/weapon systems?

- 1. yes
- 2. no

41B. If yes, with which weapons/weapon systems and when? (Mark all that apply.)

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	2a	M203 TOW	2b	year	2c	month
	3a	Dragon	3b	year	3c	month
	4a	M60	4b	year	4c	month
	5a	SAW	5b	year	5c	month
	6a	Bradley	6b	year	6c	month
	7a Other		7b	year	7c	month
	8a Other	•	8b	year	8c	month

- 42. During this recall, will you keep your same MOS (or are you being reclassified)?
 - 1. yes, keeping my same MOS
 - 2. no, being reclassified
 - 3. don't know

43.	How much training do you feel you need to assume your active duty assignment?
	 none, I'm ready now I need a little more of some training I need a lot more of some training
44.	How much training do you feel you would need if you were called to a combat situation?
	 none, I'm ready now I need a little more of some training I need a lot more of some training
45.	Please mark/list any specific tasks or skills for which you think you need training to be proficient. (Mark all that apply.)
	 45A. NBC 45B. First Aid 45C. Maintenance 45D. Weapons training 45E. Land Navigation 45F. ITT - Individual Tactical Training
	45G. Communications 45H. MOUT - Military Operations on Urban Terrain 45I. Other MOS-specific 45J. Other Common Skill
46.	How good a land navigator do you think you are? 1. very good 2. good 3. fair 4. poor 5. very poor
47A.	Were you a member of a COHORT (Cohesion, Operational Readiness Training) unit while on active duty? 1. yes 2. no
	If yes, please state unit: (47A1) location: (47A2)
47B.	Do you know of other soldiers from your old unit who are also recalled? 1. yes 2. no
47C.	Would you prefer to be reassigned with members of your old unit? 1. yes 2. no
47D.	Have you attempted to be reassigned with members of your old unit? 1. yes 2. no

- 48. Since you have been at Fort Benning, have you seen soldiers you know from other units? 1. yes
 - 2. no
- 49. How long do you expect to be on active duty as a result of this mobilization? months

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If so, what

- 51. How likely do you think it is that you could be assigned to a combat zone at some time during this tour of duty?
 - 1. very likely
 - 2. somewhat likely
 - 3. possible, but not likely
 - 4. very unlikely
 - 5. don't know
- 52. How would you feel about being assigned to a combat zone?
 - 1. I strongly want to go
 - 2. I do not mind going
 - 3. I am uncertain
 - 4. I do not want to go
 - 5. I strongly do not want to go

53. If you were to go into a combat situation, would you feel ready?

- 1. yes, I am sure I am ready
- yes, I think I am ready
 I am not sure
- 4. no, I do not think I am ready
- 5. no, I am sure I am not ready

54. How did you feel about being recalled when you first received your notice?

- 1. very positive
- positive
 neutral
- 4. negative
- 5. very negative
- 55. How did you get to the Columbus/Fort Benning area?
 - 1. plane
 - 2. bus
 - 3. train
 - 4. POV
 - 5. other

56A. Did you have any trouble getting transportation here?

- 1. yes
- 2. no

If yes, what was the trouble?

56B. To what mobilization station were you originally ordered to report?

- 1. Fort Benning
- Fort Drum
 Fort Ord
- 4. Fort Polk
- 5. Other, where?

Have you experienced any problems in-processing? 57A.

- 1. yes
- 2. no

57B. If yes, in what area? (Circle all that apply.)

(57B1)	Finance	(57B7)	Immunization
(57B2)	CIIP	(57B8)	Family Care
(57B3)	ID	(57B9)	Education
(57B4)	Medical	(57B10)	SJA (legal)
(57B5)	Dental	(57B11)	AG
(57B6)	Optometry	(57B12)	Other

- 57C. If yes, what were the problems? (Circle all that apply.)
 - long lines/waits (57C1)
 - (57C2) wrong/misplaced records
 - other, what? (57C3)
- 58. How would you rate the overall quality and efficiency of the processing you have experienced here compared with your other Army experience?
 - 1. much better
 - 2. better
 - 3. about the same
 - 4. worse
 - 5. much worse

59. Overall, has what you have encountered so far during this recall been better or worse than you expected?

- 1. much better
- 2. better
- 3. about the same
- 4. worse
- 5. much worse

60. How do you feel right now about being recalled?

- 1. very positive
- 2. positive
- 3. neutral
- 4. negative
- 5. very negative

61A. Have you experienced any problems in your training unit?

1. yes 2. no

If yes, circle all that apply.

- (61B) Interaction with Drill Sergeants/Cadre
- (61C) Curfew (61D) Lack of free time
- (61E) Training
- (61F) Freedom to smoke
- (61G) Other, what?

How many days has it been since you arrived at Fort Benning for this IRR mobilization? 62.

- 63. If you had a choice of assignment, where would you most prefer to be assigned? (Mark only one answer.)
 - 1. no preference
 - 2. my old unit
 - 3. CONUS near my home
 - 4. CONUS elsewhere
 - 5. Europe
 - 6. Pacific/Asia
 - 7. Middle East (Combat Zone)
 - 8. Other, where?

ANY COMMENTS YOU WOULD LIKE TO ADD.