

U. S. ARMY

Technical Note 1-67

AD 649517
21567907

SMALL ARMS USE IN VIET NAM: M14 RIFLE AND .45-CALIBER PISTOL

HEL Staff

January 1967

HUMAN ENGINEERING LABORATORIES



**ABERDEEN PROVING GROUND,
MARYLAND**

ARCHIVE COPY

**D D C
REPT
MAR 20 1967
REGUL
A**

Distribution of this document is unlimited.

SMALL ARMS USE IN VIET NAM: M14 RIFLE AND .45-CALIBER PISTOL

HEL Staff

January 1967

APPROVED:

A handwritten signature in cursive script, reading "John D. Weisz", is written over a horizontal line.

JOHN D. WEISZ

Technical Director

Human Engineering Laboratories

U. S. ARMY HUMAN ENGINEERING LABORATORIES
Aberdeen Proving Ground, Maryland

ABSTRACT

The U. S. Army Human Engineering Laboratories developed a questionnaire to find out how small arms are used in Viet Nam. This report gives the responses of a sample of 83 combat troops predominantly using the M14 rifle and the .45-caliber pistol.

SMALL ARMS USE IN VIET NAM: M14 RIFLE AND .45-CALIBER PISTOL

To gain a better understanding of how, and under what conditions, small arms are used in Viet Nam, the U. S. Army Human Engineering Laboratories (HEL) developed a questionnaire and had it administered to a sample of 83 U. S. combat troops serving in Viet Nam.

A sample questionnaire is shown on the following pages. It included sufficient instructions for self-administration.

The blank questionnaires were sent to the Chief, Army Concept Team in Viet Nam, with a request that they be distributed to combat units which were in combat or which had just returned from combat. The distribution of personnel by combat units was as follows:

1st Marine Division	9
3rd Marine Division	52
5th Marine Division	8
7th Marine Division	8
9th Marine Division	2
26th Marine Division	3
Not specified	<u>1</u>
Total	83

The results of this survey are given next to each alternative on the sample questionnaire: the number of personnel marking each alternative, and its percentage of the total responses to the question. (In a few cases, the total number of responses to a question varies from 83, because personnel either omitted the question or marked more than one answer.)

The troops' answers to questions 25 and 27, and their comments, are given at the end of the sample questionnaire. To preserve realism, their statements are reproduced just as they were written, with a minimum of editing.

This report is based on responses from troops using predominantly (67%) the M14 rifle. It supplements data from troops carrying the M16 rifle - already published in HEL Technical Note 5-66, Small Arms Use in Viet Nam: Preliminary Results.

COMBAT QUESTIONNAIRE

Instructions

The U. S. Army Human Engineering Laboratories, Aberdeen Proving Ground, Maryland, are doing research to find better ways to design small arms--so future small arms will be even better and more effective than the ones you use now. But we need your help!

We need background information about how you use your small arms. By answering this questionnaire, you can help us improve future small arms.

This questionnaire should be filled out only by personnel who-

- are Combat Infantrymen or Combat Marines
- have been in Viet Nam at least six months
- are below the rank of Captain
- are squad leaders or members in rifle companies or organization (if possible)

Simply circle the answer closest to what you believe is true. No names are required.

QUESTIONNAIRE

1. What small arm weapon do you normally use?

M1 $\frac{0\%}{0}$	M14 $\frac{67\%}{58}$	M16 $\frac{0\%}{0}$	45 cal. Pistol $\frac{28\%}{24}$	M79 $\frac{4\%}{4}$	Shotgun $\frac{1\%}{1}$
--------------------	-----------------------	---------------------	----------------------------------	---------------------	-------------------------

2. Do you usually see an enemy soldier to shoot at?

Always $\frac{0\%}{0}$	Most of $\frac{10\%}{8}$ the time	Some of $\frac{82\%}{68}$ the time	Never $\frac{8\%}{7}$
------------------------	--------------------------------------	---------------------------------------	-----------------------

3. Do you aim each shot?

Always $\frac{10\%}{8}$	Most of $\frac{48\%}{40}$ the time	Some of $\frac{41\%}{34}$ the time	Never $\frac{0\%}{0}$
-------------------------	---------------------------------------	---------------------------------------	-----------------------

4. Do you usually fire at a target more than once?

Always $\frac{32\%}{27}$	Most of $\frac{46\%}{38}$ the time	Some of $\frac{22\%}{18}$ the time	Never $\frac{0\%}{0}$
--------------------------	---------------------------------------	---------------------------------------	-----------------------

5. Normally, how far away is the enemy when you shoot?

300 yds $\frac{15\%}{13}$	200-300 $\frac{46\%}{39}$ yds	100-200 $\frac{30\%}{25}$ yds	less than $\frac{8\%}{7}$ 100 yds
---------------------------	----------------------------------	----------------------------------	--------------------------------------

6. How often do you fire at the enemy at night?

Most of 10%	Some of 77%	Never 12%
the time 8	the time 64	10

7. When you fire at night, do you see the enemy clearly?

Most of 6%	Some of 42%	Never 51%
the time 5	the time 35	42

8. At night, do you aim your weapon or just point it in the general direction?

Always aim 18%	Aim some 45%	Never aim, 36%
15	of the time 37	just point 30

9. How much ammunition do you normally carry?

More than 16%	100-200 55%	Less than 29%
200 rds 13	rds 46	100 rds 24

10. How often do you get more ammunition?

More than 7%	Once a day 23%	Less than 61%	When needed 8%
once a day 6	19	once a day 50	7

11. Do you or your squad ever use tracer ammunition?

Yes 88%	No 12%
73	10

12. If you use tracer ammunition, do you use it more at night or in the daytime?

At night 52%	During the day 32%	No difference 6%
44	27	5

13. Do you carry a bayonet?

Yes 45%	No 55%
37	46

14. If you have a bayonet, is it fixed to your rifle?

Always 0%	Sometimes 28%	Never 70%
0	23	58

15. Do you ever have a stoppage with your rifle?

Quite often 4%	Sometimes 35%	Never 60%
3	29	50

16. How often do you clean your rifle?

Several times 11%	Once a day 69%	Less than 18%	Never 2%
a day 9	57	once a day 15	2

17. Which would you rather have? Both 1%
1
- | | | |
|-------------------------------|-------------------------------------|-----------------------|
| More accurate rifle 71%
59 | A rifle that fires faster 26%
22 | More Distance 1%
1 |
|-------------------------------|-------------------------------------|-----------------------|
18. Do you ever have any trouble hearing things after you shoot a lot?
- | | | |
|----------------------------|---------------------|-----------------|
| Most of the time 12%
10 | Sometimes 61%
51 | Never 27%
22 |
|----------------------------|---------------------|-----------------|
19. When you are attacked in a defensive position, what weapons does the enemy usually use?
- | | | | | |
|----------------------|-------------------|-------------------------|---------------------|------------------|
| Small Arms 51%
47 | Mortars 16%
15 | Other Artillery 0%
0 | All Types 32%
30 | Grenades 1%
1 |
|----------------------|-------------------|-------------------------|---------------------|------------------|
20. Do you use flares when attacked at night?
- | | | | |
|---------------------------|----------------------------|---------------------|-----------------|
| All of the time 34%
28 | Most of the time 29%
24 | Sometimes 27%
22 | Rarely 10%
9 |
|---------------------------|----------------------------|---------------------|-----------------|
21. Do you wear any body armor besides your steel helmet?
- | | | |
|---------------------------|---------------------|---------------|
| All of the time 79%
65 | Sometimes 19%
16 | Never 2%
2 |
|---------------------------|---------------------|---------------|
22. What is your biggest health problem?
- | | | | |
|-----------------|-----------------|----------------|------------------------------------|
| Colds 23%
20 | Malaria 5%
4 | None 34%
29 | Other* 38%
(Please indicate) 32 |
|-----------------|-----------------|----------------|------------------------------------|
23. How well did your training prepare you for this type of combat?
- | | | |
|-----------------------|-----------------------|---------------------|
| Not so well 18%
15 | Fairly well 46%
38 | Very well 36%
30 |
|-----------------------|-----------------------|---------------------|
24. When you see an enemy soldier, is he usually:
- | | | | |
|-------------------|------------------|------------------|---------------|
| Running 44%
40 | Standing 3%
3 | Hidden 50%
45 | Prone 3%
3 |
|-------------------|------------------|------------------|---------------|
25. What do you need (type of weapon, ammunition, or anything else) which would help you the most? (Please write in 25 words or less)**

* See page 7.

** See page 8.

26. Please give:

Your rank & position in your group: _____

Your Unit _____

How long in Viet Nam _____

27. If you want to add anything on your own, please do so here: *

Thank you for your help. The information you have given us will help equip our combat soldiers better in the future.

* See page 13.

22. "Other" health problems:

Foot trouble	12
Ringworm	3
Jungle rot	3
Athlete's foot	1
Skin infection, irritation, and rash	5
Heat rash	5
Heat	1
Infections	1
Diarrhea and dysentery	6
Sanitation	1
Headaches	1
Mental	1
Homesickness	1

25. What do you need (type of weapon, ammunition, or anything else) which would help you the most? (Please write in 25 words or less)

It all depends on what terrain you are in. Thick jungle brush -- carbine. Open fields -- longer ranged rifles with accuracy.

Better non-rusting material in gear.

A weapon more climatized in the material its made of, so there would be less corrosion and less time spent on cleaning.

Shoulder holster is needed by infantry because hip holster makes a man a target.

A Point man should carry a shotgun because of one reason the being the enemy isn't usually more than 100 to 200 yards away.

Improved 60mm ammunition, better repairs capability. Fiberglass or other form of stock for M-14, which can withstand the beating an infantry man dishes out.

I believe from what I've heard that the M16 is a better weapon (more accurate, farther range, shoots faster). Ammunition is 7.62. Maybe some higher explosive ammo.

Something to take the place of the .45 cal. pistol which would be as easy to carry but has more range and accuracy.

For the M-79 they should vary type of round (WP, heat, smoke). Also increase range.

For M-79: 1. W. P. Rounds. 2. Buck Shot rounds. 3. Increase range.

The LAW would be great if they made a W. P. round for it.

I need a weapon to take the place of the .45 cal. but which won't be as buxom as an M-14. I'd need something more effective to fall back on after using up M-79 rounds.

White phosphorus rounds and red and green flares for the M-79.

A 40mm W.P. round. Red and green signal flares (40mm type). A 40mm shotgun, pellet, round.

If we had a W. P. round and illumination for the 60mm mortar.

A lighter and shorter weapon.

An armor vest that is lighter and a buckshot round for M-79.

Terrain should be the dictator of weapons type. Thick jungle small weapon -- such as carbine. Rice paddies need weapon with longer range and accuracy.

Nothing.

A lighter automatic rifle with lightweight magazines made of an alloy which would be more resistant to rust.

A better mag. for M-14. A plastic mag. would be better. Better body armor. A lighter armor like the air wing. An up to date map. The map that we use today is off up 200-300 meters in some places.

1. Lighter body armor. 2. Better magazines for M-14. 3. A more durable rifle. Remarks: 1. The present body armor is too bulky. The aviation personnel have a lightweight type armor that is suitable for the infantry man. This type would be most desirable. 2. A plastic, throw away magazine would be most desirable in that the rust problem, along with cleaning problem, would be solved. 3. The flash suppressor is too easily broken or knocked out of line. Thus causing poor shooting as well as endangering the marine firing the rifle.

More clothing, clothing hard to get. Lightweight body armor. Foul weather uniform. Packs out of date.

A lighter faster firing rifle than the M14.

My choice would be AR15 or STONER (M16). Reason because most combat encounters in the infantry is close range; need fire power not well aiming.

The M16 rifle would be more useful in the type of close combat in Viet Nam, because of its high volume of fire. Also because of its lighter weight, which enables a trooper to move much faster and also he can carry more ammo than usual.

If we had lighter equipment it would allow the troops to go a longer distance in shorter time. Weight is one of the worst problems over here in Viet Nam.

For one thing, a weapon lighter than the one I now have and which would be easier to keep clean. A projectile that could do the damage of more than one of our present type. Body armor of a lighter material but made of stronger material.

A lighter weapon, a magazine which holds more rounds for all personnel, a light machine gun for radio man and corpsman.

We need a lot more M79 rounds, and a W.P. round for the M79. The LAW is no good to us, not effective in heavy terrain, malfunctions too much. The M14 is too big and heavy for jungle warfare.

More M79 weapons and rounds. M16 rifle for more fire power, and less weight.

What would help me most is a weapon, lighter than the M14 and more compact. It must be as durable and accurate as the M14, and be effective up to at least 400 meters, and preferably 500. We also need a WP round for the M79 grenade launcher.

A light auto or semi auto weapon capable of ranges to 500 meters accurately with the stopping power of a .45 cal weapon. Easy to assemble and disassemble quickly.

Some lighter body armor with more protection for the lower part of the body.

Smaller caliber than the 7.62 NATO but larger than the M16 with more accuracy. The weapon should be made of a more rust resistant alloy.

I think we should have a weapon as accurate as the M14 if not more that wouldn't rust as easy as the M14.

No comments on weapons or ammunition; however, we need the authority to clear villages the way they should be cleared. Sure we may damage property but when you clear a village once you feel that you've done the job instead of grazing over the village 10 times not moving items and not finding a thing.

Newer ammunition. Wood on rifle stocks for M14 is swelling too much in rain. After taking rifle apart it is impossible to put it back together without drying the stock first.

Rifle grenades.

More clothing. Clothing are hard to get. Utilities mainly. Packs are too old, out of date. Mag. pouches when wet you can never get mag. out without using both hands.

Make a body armor with magazine pouches on it. Because every time you have to get a magazine out you have to lift up the body armor. Also the pouches are too tight and the magazines are hard to get out.

Easier carrying rifle, non-corrosive, improvement on the present magazines, better helmet, water tight rain suit. Better hand gun.

Wide suspender straps are able to support cartridge belt better than the ones in use now.

Everything that I have here meets my needs. No other weapon can compete with the M14.

A rifle that is accurate up to 300 yds. not so bulky (big) and less weight.

The M-16, to me, seems to fulfill the bill more sufficiently because of its weight and has also been proven effective in marksmanship as well as the M-14.

AR15's are outstanding for jungle fighting.

Need a weapon which would stand up under a very hard beating. The M-14 is not strong enough made for jungle fighting. But in the open terrain the M-14 is a very good weapon.

M-16 and some type of all weather cloth.

The M14 is about the best weapon that an infantryman can use.

Better 782 gear (Marine corps web gear).

An automatic rifle that's lightweight and/or a shot gun for the point.

We would need a fragmentation/napalm hand grenade or a small napalm rocket launcher. Something that will instantaneous fire in these thick tree lines.

I got the best!

Grenade adapters for M-14.

Lighter weapon, better kind of metal.

Lighter armor gear but with the same quality of the heavier one.

WP M-79 round.

More up to date equipment. M14 magazine carriers are too tight and they rot too easily.

Get the M16.

We need an M-14 rather than AR-16.

M14 with lots of rounds.

The weapons are pretty good.

A light weapon like the carbine with a bigger caliber ammo.

A lighter more accurate rifle and be able to carry more ammunition for it.

More cleaning gear to keep my weapon in working order so I know it will work.

Type of weapon because the more fire power you have the better off you are.

W.P. M-79 rounds - - Would be excellent for close range firing at pouches and bunkers, etc.

A light weapon, more fire power, more rugged, easier to clean, less parts.

I think that the M-16 is a very good weapon and every marine should have one.

A weapon which is light. Also can take punishment. And this weapon should be automatic and semi.

A lighter weapon that would be more compact and would take up less space when moving through brush or when handling POW's. An easier-to-clean and keep effective weapon.

Magazine pouches that you can get a magazine out fast. Mag. pouches are too small once they get wet.

Lighter machine gun with to match.

27. If you want to add anything on your own, please do so here:

A squad leader should carry the M-79, so there forth he can direct his squad better. Instead of having a M-79 man to worry about.

The 45 cal. pistol is a good weapon at close ranges (up to 50 meters). I believe there should be a small weapon designed for a pistol bearer, which will exceed the range of 100 meters for more confidence, and reliability, when the going gets rough. Since I've been here, I've never used my pistol against enemy troops, for reasons (1) exposing my entire body for good shot, (2) enemy exceeding a position over 50 meters, and (3) the fear of running out of ammo too quickly.

I believe what would be quite helpful would be a grenade pouch in which you could carry more and different types of grenades. Also a better belt for the M79 rounds. The present belt rips quite often when worn around the waist. Rust is one of the major problems with the M14 rifle and magazines. There are many times where they don't be cleaned every day but I have no suggestions for this.

The M-14 does not function properly in rainy weather. Mud seems to clog action. The weapon also seems to rust heavily and slow down rate of fire. The M-79 cannot be used effectively in dense vegetation.

The M-79 can't be used in thick vegetation and the M-14 don't function properly in this type of weather which consists of mostly rain and mud.

I would have an M-79 with greater accuracy and distance. Put the sight on the side of the M-79. So as not to have to hold the weapon at such high trajectory when shooting at targets over 100 yards.

White phosphorous round for M-79 and LAWs would be a good addition to ammunition needs.

M-16 is a lighter weapon and should be used by marines today. I think that if marines was armed with this weapon for the close-in fighting that we do today it has a high rate of fire and a lot more ammo can be carried. Better mag. pouches would be a lot better. Pouch would be better because that you can carry two mag in each pouch and it is made of better fabric.

The M 14 rifle is capable of doing the job. However, because of the climatic condition here, along with the terrain, rust is a major problem. If there is some way of combating this then the combat marine would greatly appreciate this information.

Other reasons for my choice of weapons are as follows: A. Lighter ammunition and smaller magazine will allow an infantryman to carry more with greater ease thus be more effective. B. Weapons are more suitable to Viet Nam and jungle warfare. Resistance to rust, lighter, much easier to handle.

One of the most important things needed is more and better training on the use of the compass and map. Most troops arriving in Viet Nam don't know that the map is to be read right and up. They don't know how to read coordinates, or map symbols. As far as the compass, most troops don't know how to shoot, or that the mills are used now, instead of degrees. Also how to use the compass at night is not known by many troops.

Most all Marines use M14, they're a good weapon but they have developed better weapons which are lighter and more destructive. But the people who have these weapons are the Army or Air Force, which use them to stand guard. Exception of the Army and they're in the field sometimes. Why can't all service men have this type of weapon including the Marines? Also a radio man usually carries a 45 or M14. He should carry a light machine gun, because if his patrol ever gets hit hard a 45 isn't much good and a radio and M14 is too hard to run around with, but with a light gun he can maneuver good and shoot at a longer range.

A few thoughts. 1. Instead of shelter halves, issue 1 poncho and 1 rain-suit per man. 2. Make individual load as small as possible, i.e., 1 shaving kit per fire team, 2 sets writing gear per fire team. 3. Each man carry an access pack with essentials only. To move quickly and quietly, we must move light. The above suggestions will help accomplish this. 4. Also do away with helmet and flack jacket. Issue rain hat instead. Helmet at night cuts down hearing and sight. Is also noisy and won't stop or divert hit. Flack jacket good only for small shrapnel. Too big, bulky, hot, and when it rains too heavy. Also very noisy at night.

The Marine units should be deployed more on a fire and maneuver basis. I feel that we aren't aggressive enough to accomplish what we are here for.

A more improved stock for M-14.

Something should be done about Marines always getting equipment second hand or when it's already outdated. Examples: flack jacket, helmet, M14, Mighty Mite.

Marines need more training before coming to Viet Nam.

I think Marines should be able to do the job they have done in the past wars, and let the Army do the pacifying!

I believe the training programs of the armed forces are proving more effective each month, because the servicemen are supplying the vital information needed in order to make the combat unit fighting with guerilla warfare more effective. Of course there will always be improvements but that is taken for granted.

A better way or faster way of getting artillery for support. Also faster med evacs.

I feel that you should not fire your weapon at night, because the muzzle flash will give your position away. You should throw a M-26. And only fire when you have a definite target. Also I feel that supporting arms are not as well trained as they used to be. It takes too long to get air support.

Let the Army keep the M-16s.

Be more strict on the civilians!

Better things to work with. 7-82 gear (Marine corps web gear) is falling apart and old.

A weapon with a better sight is needed. The sight on the M-14 is far too small for jungle warfare. Less gadgets in the outside so you can move more quickly thru less terrain without snagging vines (etc).

Flak jacket and make them lighter and also utility. Should be waterproof.

DOCUMENT CONTROL DATA - R & D

(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

1. ORIGINATING ACTIVITY (Corporate author)		2a. REPORT SECURITY CLASSIFICATION	
U. S. Army Human Engineering Laboratories Aberdeen Proving Ground, Maryland		Unclassified	
2b. GROUP			
3. REPORT TITLE			
SMALL ARMS USE IN VIET NAM: M14 RIFLE AND .45-CALIBER PISTOL			
4. DESCRIPTIVE NOTES (Type of report and inclusive dates)			
5. AUTHOR(S) (First name, middle initial, last name)			
HEL Staff			
6. REPORT DATE	7a. TOTAL NO. OF PAGES	7b. NO. OF REFS	
January 1967	18	0	
8a. CONTRACT OR GRANT NO.	8b. ORIGINATOR'S REPORT NUMBER(S)		
b. PROJECT NO.	Technical Note 1-67		
c.	8c. OTHER REPORT NO(S) (Any other numbers that may be assigned this report)		
d.			
10. DISTRIBUTION STATEMENT			
Released to Department of Commerce for sale to public. Distribution of this document is unlimited.			
11. SUPPLEMENTARY NOTES		12. SPONSORING MILITARY ACTIVITY	
13. ABSTRACT			
<p>The U. S. Army Human Engineering Laboratories developed a questionnaire to find out how small arms are used in Viet Nam. This report gives the responses of a sample of 83 combat troops predominantly using the M14 rifle and the .45-caliber pistol.</p>			

Unclassified

Security Classification

14. KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
Small Arms Rifling (guns) Human Factors Engineering						

Unclassified

Security Classification