



NSSF® Report
**CONSUMER
KNIFE MARKET**



Conducted for the
National Shooting Sports Foundation*
by InfoManiacs



THE FIREARMS INDUSTRY TRADE ASSOCIATION

| NSSF.ORG



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TABLE OF CONTENTS

	Page No.
Acknowledgments	3
Executive Summary	4
Conclusions and Implications	10
Introduction	14
Study Objectives	14
Methodology	14
Study Results	17
Sample Profile – Geographic Distribution	17
Sample Profile – Overall Respondent Profile	18
Knife Ownership	19
Frequency of Usage	21
The Most Recent Knife Purchase Occasion	22
The Importance of Knife Features Impacting Purchase	29
Knife Usage Levels and Expectancy for Longevity	31
Purchase Activity and Spend	33
Attitudes and Opinions Regarding Knife Purchase, Ownership and Usage	41
Key Subgroup Profiles	
Age	48
Geographic Region	51
Income	52
Appendix A: About Maximum Difference Scaling (MaxDiff)	55

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About NSSF®

The National Shooting Sports Foundation is the trade association for the firearms, ammunition, hunting and shooting sports industry. Its mission is to promote, protect and preserve hunting and the shooting sports. Formed in 1961, NSSF has a membership of more than 10,000 manufacturers, distributors, firearms retailers, shooting ranges, sportsmen's organizations, and publishers. For more information, log on to www.nssf.org

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InfoManiacs, Inc. is a full-service custom primary research, statistics and strategy consultancy providing the information companies need to make informed business decisions to effectively compete and realize maximum potential. Our company designs and implements both qualitative and quantitative research studies across a broad spectrum of industries. We specialize in the strategic application of advanced analytics to new product development, product, line, portfolio and pricing optimization, consumer and/or customer segmentation, and positioning studies. To find out more about how InfoManiacs can help you get answers to your business questions, please contact Laura Kippen, (708) 447.6771, kippen@imaniacs.com.

Executive Summary

The overall objective of this research is to profile hunting and sporting knife owners both demographically and behaviorally to assist the industry in better serving this population. Specific objectives are to determine:

The populations of interest for this study are hunting or sporting knife owners who:

- Are 18 years old or older
- Own a minimum of three hunting and/or sporting knives
- Purchased at least one hunting or sporting knife in the past three years
- Intend to purchase at least one hunting or sporting knife in the next 12 months

For screening purposes hunting and sporting knives were defined as “Folding or fixed blade knives used for work or other activities (excluding kitchen/culinary knives, multitools such as Leatherman & Swiss Army knives, and blade holders/box cutters/safety/utility knives).

Within the questionnaire, hunting and sporting knives were further divided into seven categories: hunting, tactical, survival, rescue, fishing, outdoor recreation and everyday carry (EDC). Each category was defined for respondents as follows:

Hunting - Knives specifically used for hunting related tasks including field dressing activities such as caping, skinning, deboning, etc.

Tactical - Knives used for actions related to tactical scenarios. These may be offensive or defensive actions faced by military, law enforcement, first responders and/or civilians.

Survival - Knives used in harsh or risky outdoor conditions where a person is stranded and must survive by making tools from wood, building shelters, starting fires for warmth or to signal to search parties, and other similar tasks.

Rescue - Knives used by rescue and other personnel for duties such as extrication, removal of clothing to expose wounds, etc.

Fishing - Knives used specifically for fishing tasks such as cleaning, gutting or filleting fish, cutting fishing line, etc.

Outdoor recreation (e.g. camping, hiking, climbing, paddle sports, boating) - Knives used in recreationally-focused outdoor activities for building camp fires, cutting tree limbs, cutting rope and cord, outdoor food preparation, etc.

Everyday Carry (EDC) - A general category of knife that is commonly carried to perform a variety of tasks that may arise on a daily basis. The tasks can range anywhere from opening boxes or envelopes, cutting string or rope to self-defense and anything in between.

The research was conducted online utilizing customer and consumer lists from the NSSF, A Girl and A Gun and several knife manufacturers. The questionnaire was tested and fielded from November 6, 2018 to January 8, 2019 and the drawing for the gift card took place on January 9th. The winner was notified by the NSSF. A total of 1,364 respondents completed the questionnaire and unless otherwise stated, the base for all counts and percentages is 1,364.

The vast majority (93.8%) of respondents have owned hunting and/or sporting knives for 10 or more years. Only 2.3% of respondents have owned a knife for five years or less.

Respondents own an average of 22.3 knives (median=12). Slightly over 1% of respondents reported owning in excess of 100 knives.

Everyday carry knives are the most frequently owned knives and owned in the greatest quantity. Nearly all (94.4%) respondents own at least one and 10.4% report owning 20 or more. On average, respondents own 5.76 EDC knives. Hunting knives are second with 85% of respondents reporting that they own at least one and 5% owning 20 or more. Respondents own an average of 4.56 hunting knives. The mean number and upper limit of knives owned in each category is likely conservative since response categories were capped at 20.

Those that collect knives report owning an average of 46.6 (median = 15.0) knives in their collection with nearly one in six (14.4%) owning in excess of 100 knives.

Respondents, on average, use one or more of their knives at least weekly if not daily. By far, everyday carry is the most frequent task for which a knife is employed. 85.5% of respondents indicated they used a knife daily for general tasks and nearly half (44.8%) indicated they used a knife daily for work. There was a nearly equal split between those who carry a knife daily for self-protection (35.3%) and those who never carry a knife for this purpose. At once or twice a year, survival was the activity that saw the least frequent knife usage.

Respondents described their last knife purchasing occasion as follows:

- Nearly two thirds of respondents purchased one knife during the last purchase occasion but the average number of knives purchased was just shy of two (1.89). Over one in ten respondents (10.8%) purchased four or more knives.
- Of those who purchased more than one knife the last time they made a knife purchase, 57.2% bought multiples of the same knife. After accounting for multiples, nearly half (46.0%) of those who bought more than one knife, only bought one unique knife. Slightly over a quarter of respondents (28.0%) bought two unique knives. Among those who bought more than one unique knife, 4.5% bought 10 or more. A total of 1900 unique knives were described.
- The most commonly purchased knife at the last purchase occasion was an EDC. Nearly half (47.4%) of respondents purchased at least one. Nearly one in five respondents bought hunting knives (19.2%) and tactical knives (16.4%) were third most frequently purchased.
- Two thirds (69.4%) of the knives purchased were folders. Nearly all the EDC knives (96.0%) knives and the majority of rescue (83.8%) and tactical knives (67.0%) were folders. Nearly all the survival knives (88.4%) had fixed blades and most of the outdoor recreation (59.1%), hunting (68.4%) and fishing knives (74.3%) were also fixed.
- The overall average length of the knife blades purchased was 4.0 inches. Survival knives had the longest average blade length of 6.3 inches and EDC knives had the shortest at 3.4 inches.
- Consistent with blade length, the longest knives overall were survival knives with an average length of 10.5 inches and the shortest knives overall were EDC at 6.6 inches. The average overall length is 7.5 inches.
- EDC knives are the most frequently used type of knife. Nearly two thirds (62.0%) of respondents who purchased an EDC knife reported using it daily. 40.5% of respondents who purchased a rescue knife use it daily and 37.2% of those who purchased a tactical knife use it (carry it) daily.

Respondents who purchased hunting, fishing, outdoor recreation, and survival knives most frequently reported using them only occasionally. A small percentage of respondents purchased survival, hunting and fishing knives exclusively for collecting and do not intend to use them at all.

- Overall, respondents spent an average of \$113.06 the last time they purchased one or more knives. On average, respondents spent significantly more per knife on tactical knives and rescue knives than on any other type of knives. Respondents spent the least per knife on fishing knives.
- Respondents tended to buy the category of knife designed for its intended purpose especially for fishing (82.9%), EDC (82.1%) and hunting (69.5%). However, there is overlap in usage. Respondents purchased:
 - Tactical (32.1%), rescue (35.1), and outdoor recreation knives (14.8%) for everyday carry
 - Survival knives (22.1%) for outdoor recreation
 - Rescue knives (13.5%) for survival.
 - Respondents bought survival, tactical and hunting knives for collecting.
- Although respondents indicated previously that they purchased the knife designed for its intended use, what they actually use the knife for, not surprisingly, varies considerably.
 - Outdoor recreation, EDC, and rescue knives are particularly appealing for general chores.
 - EDC and tactical knives are often used for work (non-culinary).
 - Tactical and rescue knives are also used for everyday carry.
 - Survival, hunting and outdoor recreation knives are frequently used for hunting.
 - Survival knives are also used for camping.

Respondents evaluated 37 knife features to determine their importance in the decision to purchase specific types of knives. Respondents evaluated these attributes for a specific knife type that they currently own by participating in a maximum difference scaling task (MaxDiff). Five features rose to the top of the list as the most important across all seven knife types. They are:

- Ability to maintain a sharp edge
- Can withstand hard use
- Appropriateness for the task
- Comfort in the hand
- Blade material (e.g., steel, alloy, ceramic)

Beyond the top five features, the feature importance begins to differentiate more by knife type. Hunting, tactical and fishing knives tend to group together and rescue, survival and outdoor recreation knives group together. EDC knives, being more general in utilization, tended to reflect the average feature importance across all knife types. The features that tend to be of higher importance for hunting, tactical and fishing knives involve functionality associated with folding knives while features associated with hard usage and a fixed blade are more important for rescue, survival and outdoor recreation.

Most users report moderate use of their knives. Knives used for work, EDC, outdoor recreation and hunting tend to see higher levels of usage while knives used for self-protection and fishing tend to see lower levels of usage. More respondents who use their knives for work or survival reported submitting the knives to harsher use than those who use their knives for other activities.

The majority of respondents expect their knives to last a minimum of 5 years up to a lifetime of use regardless of the type of knife. On average respondents expect their knives to last 10 years or more. Those who use their knives for hunting expect them to last the longest. Nearly half (45.9%) expect their

knives to last a lifetime. A large proportion of those who use their knives for fishing (40.9) and self-protection (40.0) also expect their knives to last a lifetime. Those who use their knives for work have the lowest expectation for longevity.

Respondents spent an average of \$336.19 on hunting and sporting knives in the past 12 months but project spending considerably less, an average of \$249.67 (median = \$187.00), in the coming 12 months. Knife collectors spent an average of \$1,819 (median = \$1,250) on knives specifically for collecting in the past 12 months.

In keeping with the popularity of EDC knives among respondents, nearly three quarters (72.7%) plan to purchase an EDC knife sometime in the next 12 months. A third of respondents intend to purchase a tactical knife (32.6%) and slightly less than a third of respondents intend to purchase a hunting (30.7%) and outdoor recreation (27.6%) knife.

The top five knife accessories purchased are for knife maintenance. A third of respondents (33.8%) purchased a guided manual sharpener and a third (32.6%) purchased honing oil. Non-guided manual sharpeners (25.4%), cleaner/rust remover (17.7%) and electric sharpener (15.2%) round out the top five. A quarter of respondents (26.8%) indicated that they did not purchase any knife accessories in the past 12 months and 42.2% indicate they do not intend to purchase any accessories in the next 12 months. Many of the anticipated purchases in the coming 12 months are also for knife maintenance. Honing oil and rust remover are the top items to be purchased along with guided manual sharpeners.

Respondents spent an average of \$106.32 (median=\$62.00) on accessories in the past 12 months. Over half of respondents expect to spend the same on accessories in the coming 12 months and more respondents indicate they intend to spend less on accessories than those who intend to spend more suggesting a net loss in spend on accessories in the next 12 months.

Over half (59.5%) of respondents purchased knives through outdoor specialty stores. Although 43.6% of respondents purchased one or more knives from online-only retailers and 42.9% purchased at least one from other types of online retailers (e.g., mass merchants, Amazon), half (51.1%) of respondents bought at least one knife from both types of online retailers. A third of respondents (34.8%) buy directly through manufacturers websites. Less than a third of respondents also purchased knives through local firearms shops (29.7%), mass merchants (27.5%), and general sporting goods stores (26.2%).

Nearly half (46.0%) of respondents purchased knife equipment and accessories from outdoor specialty stores and a third (33.0%) made purchases online from a mass merchant, Amazon, outdoor specialty store, general sporting goods stores, etc.

Over half (57.3%) of respondents' research knives on manufacturers websites. Respondents are also equally likely to reference YouTube (37.5%), magazines and periodicals (36.7%), online discussion forums (36.6%), friends (33.9%) and knife information websites (31.7%) not already listed.

Respondents were asked to react to 28 statements by indicating their level of agreement or disagreement with each.¹ The statement ratings were then statistically analyzed to develop groupings of

¹ A 5-point Likert-type scale was used to ascertain agreement with statements. The scale points were 1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree or Disagree, 4 = Agree, and 5 = Strongly Agree. The Top-2 Box Percentage refers to the percentage of respondents who agree or strongly agree with a statement. The center is represented by respondents who indicated they neither agree nor disagree with a statement. The Bottom-2 Box Percentage is the percentage of respondents who disagree or strongly disagree with a statement.

statements that represented a concept. A total of six multi-item concepts (factors) were identified along with six statements that did not combine with others representing individual concepts or factors. A factor mean score is created by summing across the individual responses on each statement and creating an average. The factor mean indicates respondents' level of agreement on each concept as a whole. The factors are listed here by factor mean score (highest to lowest).

Self-Protection (Factor Mean = 4.18) – Self-protection is comprised of two statements that directly and indirectly reference carrying a knife for self-protection, as the name suggests. The vast majority of respondents agreed with the statement *I never go anywhere without a knife* and two-thirds of respondents indicated they always have a knife on them for protection. Although the first statement does not automatically suggest that carrying a knife is exclusively for the purpose of protection – indeed many people carry knives for reasons other than protection – these two statements are highly correlated indicating that respondents associated always carrying a knife with self-protection.

Right Knife for the Task (Factor Mean = 3.95) - The overwhelming majority of respondents agreed that it was important to have the right knife for any given task but fewer respondents indicated they were particular about the knives used for a task. This suggests that respondents view knife types or categories as being important only to a point. A knife's intended purpose may be fluid in the minds of individuals and therefore, any knife may be considered appropriate for a given task if it's sturdy enough, has the proper configuration and readily available. This is consistent with earlier findings that consumers will use a knife intended for one purpose for something completely different.

Quality (Factor Mean = 3.77) - Nearly all respondents indicated that they only buy knives they think are well-made and nearly all respondents indicated they do not buy cheap knives so they can be readily replaced. However, only a third of respondents indicated they buy "fine"² knives indicating that respondents do not equate quality with the characteristics that define a "fine" knife. Likewise, only a third of respondents indicated they only carry knives made in the USA. Earlier it was shown that respondents considered *Made in the USA* a very important feature when deciding on the purchase of a knife. However, only a third of respondents agreed that they only carry USA made knives. It is not clear why it would be an important factor in the purchase decision but not so for daily carry.

I Love Knives (Factor Mean = 3.56) - The majority of respondents who participated in this study are bona fide knife fans. Nearly 80% of respondents agreed with the statement *I love my knives* and two thirds of respondents agreed with the statement *Knives are a work of art*. Over half of respondents never feel like they have enough knives. Slightly over half of respondents actively take notice of the knives others carry and feel they can tell a lot about that person based on their knife. As much as respondents love their knives only about a third like to act as a knife expert among friends and family.

Knife Maintenance (Factor Mean = 2.12) - As much as respondents love their knives, they enjoy maintaining them considerably less. Although the vast majority of respondents (89.1%) disagreed with the statement *I never maintain my knives* and a little over half disagreed with the statement *I hate cleaning folding knives*, only a little more than half indicated they clean and maintain their knives after every use.

Knife Abuse (Factor Mean = 2.08) - Most respondents deny abusing their knives. Only a quarter of respondents admit to using their knives for tasks they weren't designed for and fewer still admit to

² Fine, in this context, means a knife that is rare and/or exceptional in some way.

being very hard on their knives. Nearly 80% of respondents categorically deny using their knives as a screwdriver or pry bar and over 90% deny breaking their knives with regularity.

Conclusions and Implications

The highest growth in knife and accessory purchases is likely to come from the youngest segment of knife consumers (Ages 18 to 34)

The youngest participants in this study intend to purchase significantly more knives and accessories than those in older age categories. In particular, the youngest respondents intend to purchase significantly more EDC, tactical, survival and fishing knives than nearly all other age groups. Likewise, they intend to purchase a wider range of knife accessories including maintenance tools, replacement parts, cleaner/rust remover, and replacement handles/scales. The list suggests that the youngest individuals intend to be more hands-on in maintaining and repairing their knives relative to older knife owners.

The youngest knife owners are more passionate about knives. Significantly more young knife owners scored highly on the factor *I Love Knives*. There was also a significantly higher level of agreement on the factor *Self-protection* indicating younger respondents are carrying their knives daily for self-protection. However, it should also be noted that this segment had a significantly higher level of agreement on the factor *Knife Maintenance* indicating these respondents do not clean and maintain their knives as frequently as older respondents. Nonetheless, it appears the youngest respondents are serious about knife maintenance as suggested by their projected purchases.

Although the youngest knife owners intend to purchase significantly more knives and accessories than older knife owners, the anticipated spend on these items is not significantly different across age groups. As has been pointed out throughout this report, knife and knife accessory purchases are often made on impulse suggesting the youngest knife owners may spend significantly more than they anticipate.

Younger knife owners (ages 18 to 54) use their knives more frequently, subject them to higher levels of usage and have lower expectations for knife longevity lending further support to the growth potential of the youngest segment

Overall, younger knife owners use their knives more frequently than older knife owners. Younger owners (ages 18 to 54) use their knives, on average, either daily or several times per week while those older (55+) use their knives, on average, monthly to several times per week.

Younger knife owners who use their knives for work, EDC, self-protection and survival subject their knives to significantly higher levels of use (moderate to high), on average, than older respondents who use these same knives, on average, light to moderate.

The youngest respondents had a significantly higher score on the factor *Knife Abuse* indicating that they tend to use their knives more harshly than others.

Older respondents expect their knives to last 10 years or more while younger respondents expect knives to last 3 to 4 years in the case of work knives and 5 to 10 years for most others.

Overall, knife owners anticipate buying fewer knives and accessories and spending less on these items in the coming 12 months.

Knife owners reported spending an average of \$336.19 (median = \$205.80) on hunting and sporting knives in the past 12 months and projected to spend an average of \$249.67 (\$187.00) in the coming 12

months. This represents a significant decrease in spending over a one-year period. However, many knife purchases are made on impulse suggesting that actual spend in the next 12 months may not be as depressed as the numbers indicate.

Last year, respondents reported spending an average of \$106.32 (median \$62.00) on equipment and accessories for their knives. When asked whether they intended to spend more, the same or less, 58.1% indicated they intended to spend the same and 28.2% indicated they intend to spend less. A quarter of respondents (26.8%) indicated they did not purchase equipment or accessories for their knives in the past 12 months and 42.2% indicated they did not intend to buy any equipment or accessories in the coming 12 months. This too suggests that spend in the coming 12 months will be down from the past year. However, like knives, equipment and accessory purchases are also often made on a whim suggesting the drop in sales may not be as severe as these numbers would indicate.

Regardless of knife type, there are five features that have the most impact on the decision to purchase a hunting or sporting knife. Beyond the top five, the features impacting purchase tend to differentiate by knife type

The top five features impacting the knife purchase decision across all seven knife types are:

- Ability to maintain a sharp edge
- Can withstand hard use
- Appropriateness for the task
- Comfort in the hand
- Blade material (e.g., steel, alloy, ceramic)

Beyond the top five features, feature importance begins to differentiate more by knife type. Hunting, tactical and fishing knives tend to group together and rescue, survival and outdoor recreation knives group together. Survival and outdoor recreation are very closely correlated while rescue is more loosely associated with the two. EDC knives, the least specialized of the seven, tended to reflect average feature importance across all knife types.

The features that tend to be of higher importance for hunting, tactical and fishing knives involve folding knives while features associated with hard usage and a fixed blade are more important for rescue, survival and outdoor recreation.

It is interesting to note that *Made in the USA* (71.7%) is more important to respondents than *Lifetime Replacement Guarantee* (64.6%), *Value* (58.6%) and *Warranty* (54.9%). *Brand* (39.7%) is not a primary driver relative to physical knife features nor are aesthetic qualities.

Attribute Importance by Knife Category	
Hunting, Tactical, Fishing	Rescue, Survival, Outdoor Recreation
Locking mechanism	Blade shape
One-handed opening	Blade hardness
Opening action	Corrosion resistance
Folder	Blade length
Comfort in pocket	Lifetime replacement guarantee
	Balance
	Value
	Fixed blade

EDC knives are, by far, the most commonly owned, owned in the greatest quantities and the knife most likely to be purchased in the next 12 months.

Respondents own an average of 22.3 knives (median = 12.0). Nearly all (94.4%) own at least one EDC knife and 10.4% report owning 20 or more. On average, respondents own 5.76 EDC knives (median = 3.0). At the last purchase occasion, 47.4% of respondents reported buying an EDC knife. Nearly three quarters (72.7%) of respondents indicated they intend to purchase an EDC knife in the next 12 months. EDC knives are used frequently and subjected to moderate to high use. A third of EDC knife owners (30.8%) expect their knives to last a lifetime.

Hunting knives are a distant second to EDC knives. The majority of respondents (85.1%) own at least one hunting knife and those who own hunting knives own an average of 4.56. Only one in five (19.2%) of respondents purchased a hunting knife at the last purchase occasion. Slightly less than a third (30.7%) of respondents intend to purchase a hunting knife in the next 12 months. Hunting knives tend to be must less frequently and subjected to light to moderate use. They are expected to last 10 year or more and nearly half (45.9%) of hunting knife owners expect them to last a lifetime.

Although knife owners tend to buy the correct knife for the intended activity, it is not surprising knives are used for a variety of activities regardless of their type, design or intended purpose.

There is considerable overlap between knife types and knife usage.

- Outdoor recreation, EDC, and rescue knives are particularly appealing for general chores.
- EDC and tactical knives are often used for work (non-culinary).
- Tactical and rescue knives are also used for everyday carry.
- Survival, hunting and outdoor recreation knives are frequently used for hunting.
- Survival knives are also used for camping.

The overwhelming majority of respondents agreed that it was important to have the right knife for any given task but fewer respondents indicated they were particular about the knives used for a task. This suggests that respondents view knife types or categories as being important only to a point. A knife's intended purpose may be fluid in the minds of individuals and therefore, any knife may be considered appropriate for a given task if it's sturdy enough, has the proper configuration and readily available. This is highly consistent with the earlier finding that consumers will use a knife intended for one purpose for something completely different.

Outdoor specialty stores are the single retail channel that sees the most knife purchases but online retailers, both online-only and other types of online stores, are nearly as important and will likely become more so with the growth of online retailing and the consolidation of outdoor specialty stores.

Over half (59.5%) of respondents purchased knives through outdoor specialty stores making it the single most popular type of retail store for knife purchases. Although 43.6% of respondents purchased one or more knives from online-only retailers and 42.9% purchased at least one from other types of online retailers (e.g., mass merchants, Amazon), half (51.1%) of respondents bought at least one knife from both types of online retailers. Additionally, 63.1% of respondents who made a purchase online, bought at least one knife through Amazon, making it the single most popular retailer for knife purchases. Given the loss of outdoor specialty stores through consolidation and closures and the continued growth in online retailing, particularly Amazon, it is highly likely that the focus for retailing of knives will continue to shift online.

Online purchases of knife equipment and accessories is less popular than for knives themselves. A third of respondents (33.0%) purchased equipment and accessories through an online retailer like Amazon or a mass merchant and 14.5% made one or more purchases through an online-only retailer. Only 20.2% of respondents made purchases through both types of online retailers. But nearly half (46.0%) made at least one purchase through an outdoor specialty store and 27.9% made at least one purchase through a mass merchant.

Introduction

You're asking yourself "Why did the NSSF decide to conduct a study on knife-owning consumers? This is, after all, the National Shooting Sports Foundation". That's a good question. When you consider the uses for both; hunting, self-defense, outdoor recreation, collecting, etc. the parallels between firearms and knives become evident. Although you don't need a knife to own and use firearms and vice versa, there appears to be a strong, if not, symbiotic relationship between the two. For example, it was shown in the Concealed Carry Market – NSSF Report 2018 that 75.5% of those who carry a firearm also carry a knife (71.5% folding and 5.3% fixed) for self-defense. In this study, you will see that 93.3% of respondents own at least one firearm and 30% have purchased at least one knife at a firearms store. Anyone who walks the floor of SHOT Show knows that nearly every major and many minor knife manufacturer in the world can be found displaying their wares along with firearms manufacturers and those of related products and services. Clearly, the relationship between knives and firearms is both broad and deep. Indeed, it does not appear to be a stretch to state that those who use and embrace firearms likewise use and embrace knives. Thus, it makes complete sense for the NSSF to profile knife-owning consumers in the same way that it profiles firearms owners for the benefit of both the knife and firearms industries as well as the consumers these industries serve.

Study Objectives

The overall objective of this research is to profile hunting and sporting knife owners both demographically and behaviorally to assist the industry in better serving this population. Specific objectives are to determine:

- The types of knives owned, their uses and frequency of usage.
- The importance of knife features that drive selection and purchase particularly by activity.
- Shopping behaviors, spending habits and spending levels for knives and accessories (e.g., sharpeners, sheaths, storage, lanyards).
- Determine differences in behaviors and spending habits by key demographic subgroups.

Methodology

The populations of interest for this study are hunting or sporting knife owners who:

- Are 18 years old or older
- Own a minimum of three hunting and/or sporting knives
- Purchased at least one hunting or sporting knife in the past three years
- Intend to purchase at least one hunting or sporting knife in the next 12 months

For screening purposes hunting and sporting knives were defined as "Folding or fixed blade knives used for work or other activities (excluding kitchen/culinary knives, multitools such as Leatherman & Swiss Army knives, and blade holders/box cutters/safety/utility knives).

Within the questionnaire, hunting and sporting knives were further divided into seven categories: hunting, tactical, survival, rescue, fishing, outdoor recreation and everyday carry (EDC). Each category was defined for respondents as follows:

Hunting - Knives specifically used for hunting related tasks including field dressing activities such as caping, skinning, deboning, etc.

Tactical - Knives used for actions related to tactical scenarios. These may be offensive or defensive actions faced by military, law enforcement, first responders and/or civilians.

Survival - Knives used in harsh or risky outdoor conditions where a person is stranded and must survive by making tools from wood, building shelters, starting fires for warmth or to signal to search parties, and other similar tasks.

Rescue - Knives used by rescue and other personnel for duties such as extrication, removal of clothing to expose wounds, etc.

Fishing - Knives used specifically for fishing tasks such as cleaning, gutting or filleting fish, cutting fishing line, etc.

Outdoor recreation (e.g. camping, hiking, climbing, paddle sports, boating) - Knives used in recreationally-focused outdoor activities for building camp fires, cutting tree limbs, cutting rope and cord, outdoor food preparation, etc.

Everyday Carry (EDC) - A general category of knife that is commonly carried to perform a variety of tasks that may arise on a daily basis. The tasks can range anywhere from opening boxes or envelopes, cutting string or rope to self-defense and anything in between.

Respondents were provided with the definitions of each type of knife at the beginning of the questionnaire and each time the questionnaire asked respondents to provide detail about each type of knife they owned, they were provided with the opportunity to remind themselves of the definitions via mouseover.

The research was conducted online utilizing customer and consumer lists from the NSSF, A Girl and A Gun and several knife manufacturers.

Individuals were invited to participate via email under the source's masthead. As an incentive to participate in the study respondents who completed the questionnaire were given the opportunity to enter a drawing for a \$500 VISA gift card. The questionnaire was fielded in early 2019.

A total of 1,364 respondents completed the questionnaire and unless otherwise stated, the base for all counts and percentages is 1,364.

No weighting schema was applied to the data since the population size and distribution of hunting and sporting knife owners were unknown at the time of this study. The results of this study are not projectable to the entire US population of hunting and sporting knife owners. However, the results are directional and can, in combination with other available information, be used effectively for strategic decision making.

Significance testing between subgroups was conducted at the 95% confidence level ($\alpha \leq .05$). Only those differences that are significant at this level are reported unless otherwise noted. Statistical significance

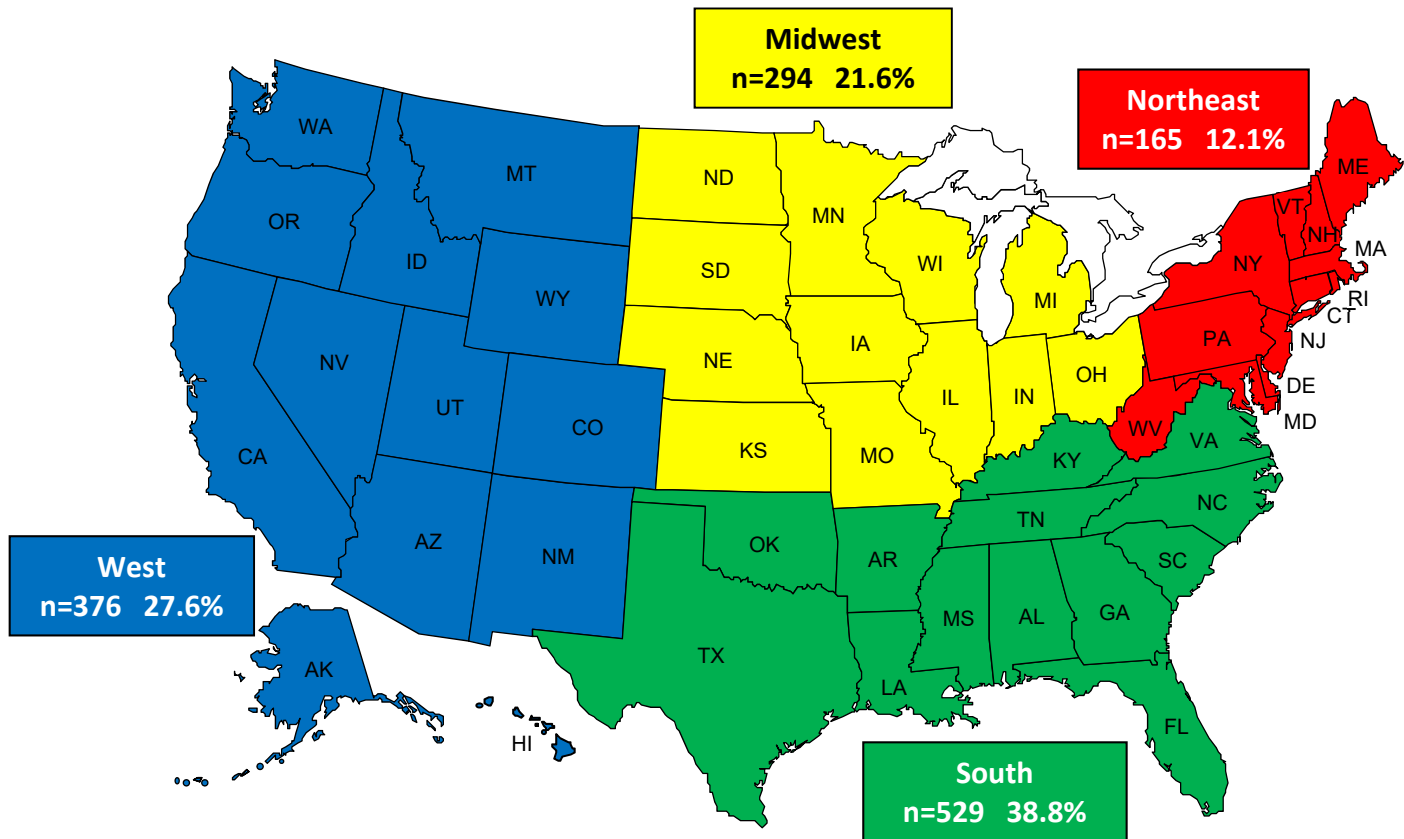
is denoted in two ways. When testing differences between two groups (e.g., men and women) an asterisk (*) is used to denote that the values between groups are statistically significantly different. The asterisk will be displayed after the larger of the two values. For variables that have more than two groups (e.g., age, geographic region) a system of letters is used to denote which subgroups differ statistically from one another. Each column will denote a letter in parenthesis and a superscript letter next to a number will denote that it is different from the number displayed in the corresponding column. As with the notation used for testing between two groups, the larger of the values that is significantly different will be noted.

Study Results

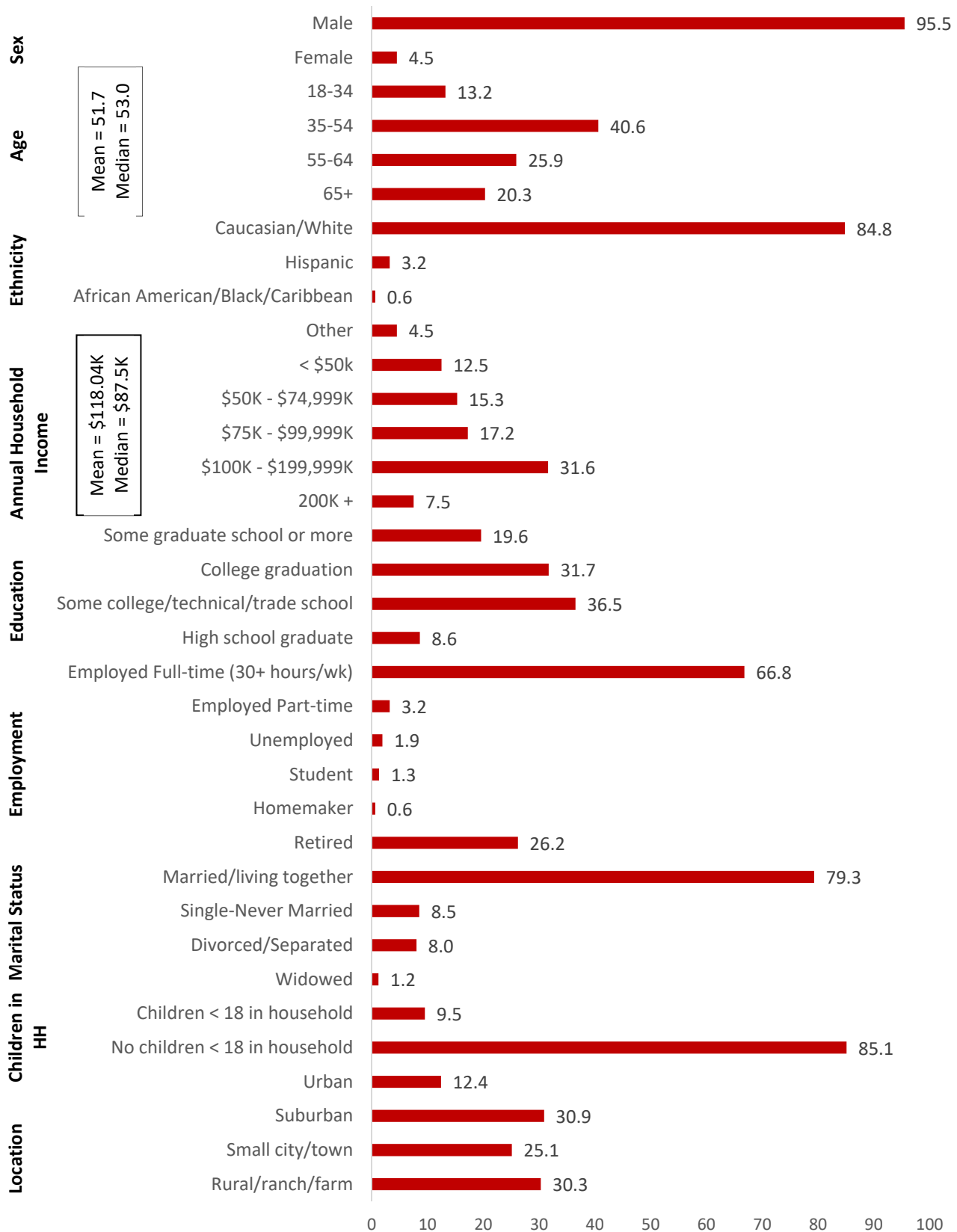
Sample Profile

Geographic Distribution

The majority of our participants came from the Southern and Western states. Approximately one in five respondents came from the Midwest and one in eight respondents came from the Northeast.



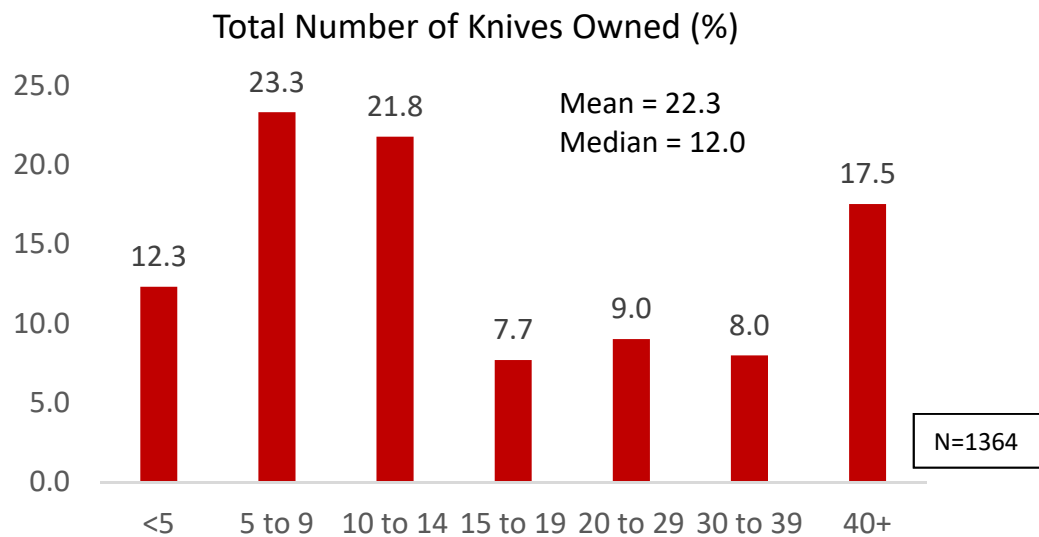
Overall Respondent Profile



Knife Ownership

The overwhelming majority (93.8%) of respondents have owned hunting and/or sporting knives for 10 years or more and 3.9% have owned knives for six to nine years. Only 2.3% of respondents have owned a hunting or sporting knife for five years or less.

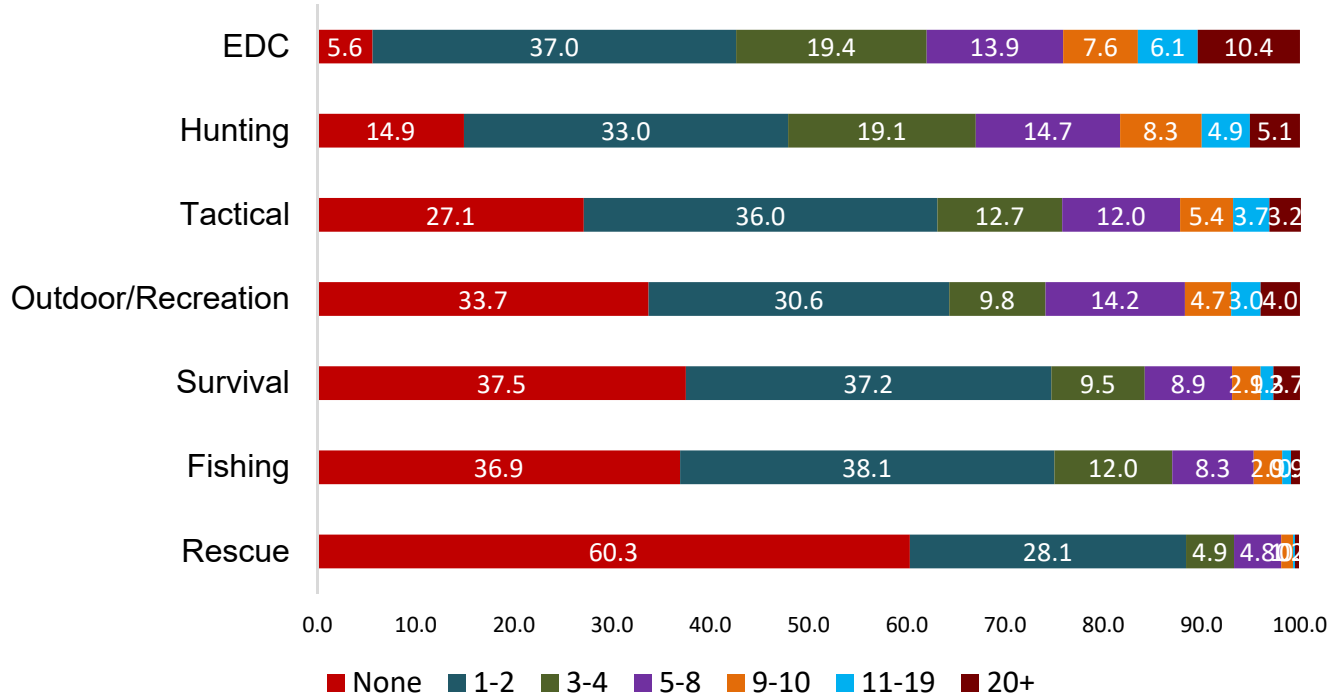
Nearly half (45.1%) of respondents own between 5 and 14 knives with 12 being the median. Slightly over 1% of respondents reported owning in excess of 100 knives skewing the mean higher. However, the number of knives owned by a small percentage of respondents is likely higher since response categories for each knife type were capped at 20+.



Q2. You indicated previously that you own [INSERT RESPONSE FROM S4] If you don't recall exactly, your best guess is fine. [PROVIDE A DROPDOWN BOX FOR EACH KNIFE TYPE. RANGE 0, 1 - 20+]

Everyday carry knives are the most frequently owned knives and owned in the greatest quantity. Nearly all (94.4%) respondents own at least one and 10.4% report owning 20 or more. On average, respondents own 5.76 EDC knives. Hunting knives are second with 85% of respondents reporting that they own at least one and 5% owning 20 or more. Respondents own an average of 4.56 hunting knives. Rescue knives are owned by the fewest respondents. Nearly two thirds of respondents do not own a rescue knife and only 28% own one or two. The average number of rescue knives owned by respondents is 1.04. The mean number and upper limit of knives owned in each category is likely conservative since response categories were capped at 20.

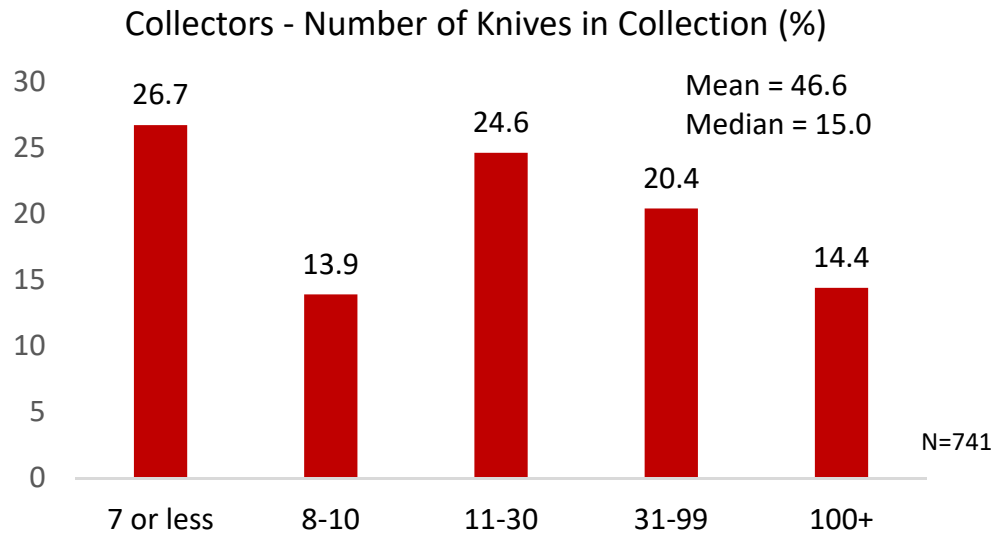
Number of Knives Owned



Q2. You indicated previously that you own [INSERT RESPONSE FROM S4] Please indicate how many of each type of knife you currently own. If you don't recall exactly, your best guess is fine. [PROVIDE A DROPDOWN BOX FOR EACH KNIFE TYPE. RANGE 0, 1 - 20+]

Knife Type	Number of Knives Owned	
	Mean	Median
EDC	5.76	3.0
Hunting	4.56	3.0
Tactical	3.35	2.0
Outdoor/Recreation	3.27	1.0
Survival	2.35	1.0
Fishing	1.99	1.0
Rescue	1.04	0.0

Those that collect knives report having an average of 46.6 (median = 15.0) knives in their collection with nearly one in six owning in excess of 100 knives.



Q3. You indicated that you collect knives. How many knives are in your collection?

Frequency of Usage

Respondents, on average, use one or more of their knives at least weekly if not daily. By far, everyday carry is the most frequent task where a knife is employed. 85.5% of respondents indicated they used a knife daily for general tasks. Nearly half of respondents (44.8%) indicated they used a knife daily for work. There was a nearly equal split between those who carry a knife daily for self-protection (35.3%) and those who never carry a knife for this purpose. Survival was the activity that saw the least frequent knife usage.

Overall Knife Usage Frequency (%)							
	Work	Everyday Carry	Tactical / Self-protection	Survival	Hunting	Fishing	Outdoor Recreation
Never	17.4	1.7	40.8	43.4	21.1	19.6	5.2
Once or twice per year	3.3	0.8	9.6	20.1	17.5	16.8	10.2
A few times per year	6.2	1.6	5.4	19.3	41.5	38.0	40.1
Once/month but not weekly	7.1	2.1	3.5	5.2	10.0	15.9	24.8

Once/week but not daily	21.1	8.3	5.4	2.9	7.0	7.3	14.2
Daily	44.8	85.5	35.3	9.2	2.8	2.3	5.5
Average Usage	Weekly	Daily	A few times/year	Once or twice/year	A few times/year	A few times/year	Monthly

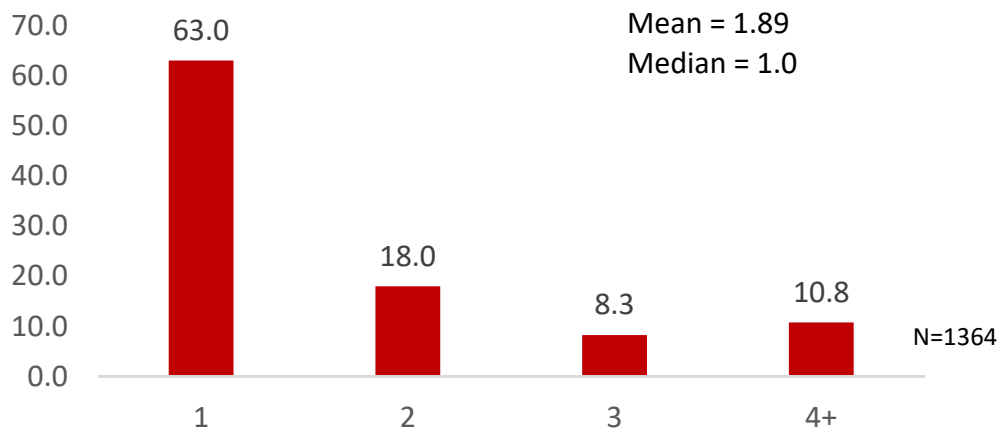
S7. Thinking about the last 12 months, approximately how frequently, if at all, do you use one or more of your hunting or sporting knives for work or other activities?

S8. Below is a list of activities where you may use your hunting or sporting knife (knives). Please indicate how frequently, if at all, you use one or more of your knives for these activities. By work we are referring to construction and trades, EMTs, law enforcement, firefighters, military, horticulture, or any other type of employment that requires the use of a fixed or folding knife. Please do not include culinary or kitchen knives, box cutters, blade holders, safety knives or utility knives.

The Most Recent Knife Purchase Occasion

Nearly two thirds of respondents purchased one knife during the last purchase occasion but the average number of knives purchased was just shy of two (1.89). Over one in ten respondents (10.8%) purchased four or more knives.

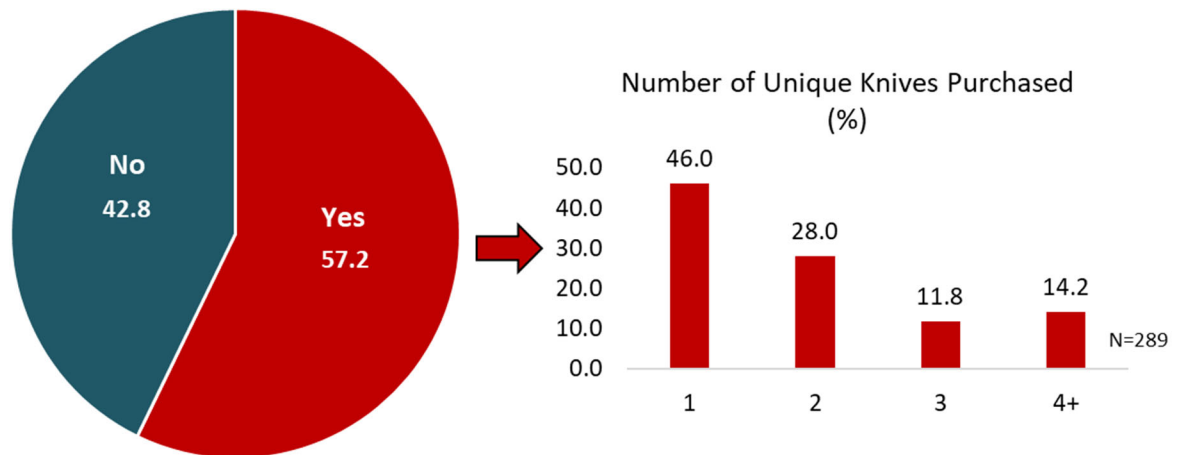
Number of Knives Purchased During Most Recent Purchase



Q4. You indicated that you purchased your last knife/knives [PIPE IN RESPONSE FROM S5]. How many knives did you purchase at that time?

Of those who purchased more than one knife the last time they made a knife purchase, 57.2% bought multiples of the same knife. After accounting for multiples, nearly half (46.0%) of those who bought more than one knife, only bought one unique knife. Slightly over a quarter of respondents (28.0%) bought two unique knives. Among those who bought more than one unique knife, 4.5% bought 10 or more.

Bought More Than One of a Particular Knife (%)



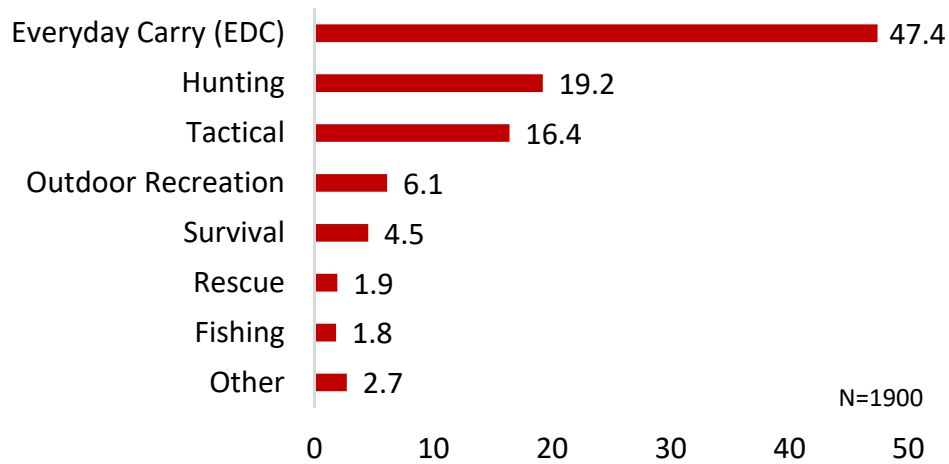
Q5. Did you buy more than one of a particular knife?

Q5a. You indicated that you bought more than one of a particular knife. How many unique knives did you buy?

Respondents were asked to describe up to three unique knives purchased at the time they made their last knife purchase including the type of knife/knives, whether it was fixed or folding, the blade length and overall length, how frequently the knife/knives are used, and how much was paid. Respondents described a total of 1,900 knives.

The most commonly purchased knife at the last purchase occasion was an EDC. Nearly half (47.4%) of respondents purchased at least one. Nearly one in five respondents bought hunting knives (19.2%) and tactical knives (16.4%) were third most frequently purchased.

Number of Knives Purchased (%)



Q6A. What type of knife is it?

Two thirds (69.4%) of the knives purchased were folders. Nearly all the EDC knives (96.0%) knives and the majority of rescue (83.8%) and tactical knives (67.0%) were folders. Nearly all of the survival knives (88.4%) had fixed blades and most of the outdoor recreation (59.1%), hunting (68.4%) and fishing knives (74.3%) were also fixed.

Fixed or Folding Knife (%)



Q6C. Does this knife have a fixed blade or is it a folder?

The overall average length of the knife blades purchased was 4.0 inches. Survival knives had the longest average blade length of 6.3 inches and EDC knives had the shortest at 3.4 inches.

Blade Length (%)										
	< 2"	2.0"- 2.9"	3.0"- 3.9"	4.0"- 4.9"	5.0"- 5.9"	6.0"- 6.9"	7.0"- 8.9"	9.0"- 1.9"	12" or more	Mean Length
EDC (N=900)	2.8	20.9	63.7	11.0	1.4	0.1	0.1	0.0	0.0	3.4
Rescue (N=37)	2.7	18.9	54.1	16.2	8.1	0.0	0.0	0.0	0.0	3.6
Tactical (N=312)	1.0	5.8	48.1	26.9	8.7	3.8	4.2	0.6	1.0	4.3
Hunting (N=364)	0.5	8.2	37.9	32.4	11.5	4.9	3.0	1.1	0.3	4.3
Outdoor recreation (N=115)	1.7	9.6	36.5	26.1	11.3	3.5	7.8	3.5	0.0	4.5
Fishing (N=35)	2.9	5.7	8.6	22.9	8.6	20.0	22.9	8.6	0.0	5.9
Survival (N=86)	3.5	5.8	10.5	22.1	17.4	14.0	7.0	10.5	9.3	6.3
Overall	2.0	14.3	50.4	19.4	6.1	3.1	2.6	1.4	0.8	4.0

Q6D. How long is the knife's blade?

Consistent with blade length, the longest knives overall were survival knives with an average length of 10.5 inches and the shortest knives overall were EDC at 6.6 inches. The average overall length is 7.5 inches.

Overall Length (%)									
	<4.0	4.0"- 4.9"	5.0"- 5.9"	6.0"- 6.9"	7.0"- 8.9"	9.0"- 11.9"	12.0"- 14.9"	15.0" or more	Mean Length
EDC (N=900)	5.7	13.4	15.6	24.9	36.4	3.8	0.2	0	6.6
Rescue (N=37)	2.7	8.1	24.3	18.9	40.5	5.4	0	0	6.8
Tactical (N=312)	1.3	5.8	12.5	21.5	37.2	15.7	4.5	1.6	7.9
Hunting (N=364)	1.4	4.9	9.3	17	41.2	20.6	4.4	1.1	8.1
Outdoor recreation (N=115)	1.8	5.2	14.8	19.1	30.4	18.3	7.0	3.5	8.2

Fishing (N=35)	2.9	5.7	5.7	5.7	25.7	31.4	17.1	5.7	9.6
Survival (N=86)	4.6	3.5	4.7	3.5	18.6	31.4	20.9	12.8	10.5
Overall	3.8	9.4	13.2	20.8	35.8	11.8	3.5	1.7	7.5

Q6D. How long is the knife overall? (From the tip of the blade to the end of the bolster)

EDC knives are the most frequently used type of knife. Nearly two thirds (62.0%) of respondents who purchased an EDC knife reported using it daily. 40.5% of respondents who purchased a rescue knife use it daily and 37.2% of those who purchased a tactical knife use it (carry it) daily. Respondents who purchased hunting, fishing, outdoor recreation, and survival knives most frequently reported using them only occasionally. A small percentage of respondents purchased survival, hunting and fishing knives exclusively for collecting and do not intend to use them at all.

Frequency of Use (%)							
	Daily	Weekly	Monthly	Occasionally	Rarely	I haven't used it yet	I bought it for collecting
Hunting (N=364)	5.5	9.9	12.4	42.9	6.9	17.0	5.5
Tactical (N=312)	37.2	20.5	4.5	15.7	5.1	13.8	3.2
Fishing (N=35)	5.7	17.1	28.6	34.3	2.9	11.4	0.0
Rescue (N=37)	40.5	29.7	8.1	16.2	0.0	5.4	0.0
Survival (N=86)	7.0	16.3	12.8	30.2	11.6	15.1	7.0
Outdoor Recreation (N=115)	11.3	17.4	9.6	33.9	6.1	20.9	0.9
EDC (N=900)	62.1	18.8	2.2	8.3	1.6	5.1	1.9
Average Usage	39.0	17.1	6.0	19.4	3.9	10.7	3.8

Q6I. How frequently do you use this knife?

Overall, respondents spent an average of \$113.06 the last time they purchased one or more knives. On average, respondents spent significantly more per knife on tactical knives and rescue knives than on any other types of knives. Respondents spent the least per knife on fishing knives.

Spend on Each Knife (%)									
	< \$25	\$25 to \$49	\$50 to \$74	\$75 to \$99	\$100 to \$149	\$150 to \$199	\$200 to \$249	\$250+	Mean Spend
Tactical (N=312)	11.3	20.6	17.3	12.1	16.5	9.9	5.2	7.2	\$144.29
Rescue (N=37)	22.9	31.4	20.0	8.6	8.6	5.8	2.9	0.0	\$134.68
Survival (N=86)	8.1	8.1	10.8	8.1	24.3	16.2	18.9	5.4	\$112.65
EDC (N=900)	14.8	27.8	17.4	12.2	11.3	7.8	2.6	6.1	\$108.54
Hunting (N=364)	11.3	19.8	14.3	10.7	17.4	11.7	6.7	7.8	\$106.12
Outdoor Recreation (N=115)	14.0	16.3	12.8	11.6	14.0	17.4	8.1	6.0	\$90.55
Fishing (N=35)	6.7	16.3	11.9	9.9	17.4	14.4	8.3	15.0	\$60.33

Q6J. How much did you spend for this knife?

Respondents tended to buy the category of knife designed for its intended purpose especially for fishing (82.9%), EDC (82.1%) and hunting (69.5%). However, there is overlap. Respondents purchased tactical (32.1%), rescue (35.1), and outdoor recreation knives (14.8%) for everyday carry, survival knives (22.1%) for outdoor recreation and rescue knives (13.5%) for survival. Respondents bought survival, tactical and hunting knives for collecting.

Primary Intended Use for Knife (%)								
	Hunting	Tactical/ Self-protection	Fishing	Work	Survival	Outdoor Recreation	EDC	Collecting
Hunting (N=364)	69.5	0.3	0.8	3.6	0.3	7.7	8.0	6.6
Tactical (N=312)	1.0	39.1	0.3	8.0	6.7	3.2	32.1	7.1
Fishing (N=35)	2.9	2.9	82.9	0.0	0.0	0.0	8.6	0.0
Rescue (N=37)	0.0	8.1	0.0	32.4	13.5	5.4	35.1	0.0
Survival (N=86)	4.7	7.0	1.2	0.0	44.2	22.1	9.3	10.5

Outdoor Recreation (N=115)	6.1	3.5	0.9	3.5	2.6	55.7	14.8	3.5
EDC (N=900)	0.8	3.1	0.1	4.2	0.6	2.3	82.1	4.6

Q7. What was the primary intended use for this knife when you purchased it?

Although respondents indicated previously that they purchased the knife designed for its intended use, what they actually use the knife for, not surprisingly, varies considerably.

- Outdoor recreation, EDC, and rescue knives are particularly appealing for general chores.
- EDC and tactical knives are often used for work (non-culinary).
- Tactical and rescue knives are also used for everyday carry.
- Survival, hunting and outdoor recreation knives are frequently used for hunting.
- Survival knives are also used for camping.

	How Knife is Actually Being Used (%)						
	Hunting	Self-defense	Fishing	Work	General chores	Camping	EDC
Hunting (N=340)	82.9	6.2	13.2	17.4	17.1	18.5	12.6
Tactical (N=290)	12.8	51.7	7.6	40.3	21.0	17.2	36.2
Fishing (N=35)	28.6	2.9	77.1	5.7	11.4	14.3	8.6
Rescue (N=37)	10.8	21.6	5.4	70.3	35.1	10.8	32.4
Survival (N=77)	31.2	22.1	5.2	18.2	20.8	50.6	10.4
Outdoor Recreation (N=111)	27.0	11.7	16.2	17.1	40.5	44.1	18.0
EDC (N=859)	10.9	21.0	11.4	48.3	39.9	15.1	60.4

Q8. What do you use your knife for? Check all that apply.



The Importance of Knife Features Impacting Purchase

Respondents evaluated 37 knife features to determine their importance in the decision to purchase specific types of knives. Respondents evaluated these attributes for a specific knife type that they currently own by participating in a maximum difference scaling task (MaxDiff)³ (See Appendix A for more information about maximum difference scaling).

Five features rose to the top of the list as the most important across all seven knife types. They are:

- Ability to maintain a sharp edge
- Can withstand hard use
- Appropriateness for the task
- Comfort in the hand
- Blade material (e.g., steel, alloy, ceramic)

Beyond the top five features, the feature importance begins to differentiate more by knife type. Color coding by the magnitude of the percentages reveals the relationships between knife categories and the features that drive the selection of a particular knife within a category. Hunting, tactical and fishing knives tend to group together and rescue, survival and outdoor recreation knives group together.

³The percentages that are derived from a MaxDiff task are not interpreted as standard response frequencies. A percentage corresponding to a specific attribute represents the **likelihood** that it will be selected when it is present in a list of many attributes. So, to use our results as an example, the 95.5% associated with *Ability to maintain a sharp edge* can be interpreted to mean that when *Ability to maintain a sharp edge* was among the attributes presented to respondents in a particular scenario, it was likely to be selected as the most important attribute 95.5% of the time. Another attribute *Handle shape* has a value of 52.5% associated with it. This means that when *Handle shape* was presented in a list of attributes, it had a likelihood of being selected as the most important only 52.5%. Comparing *Ability to maintain a sharp edge* with *Handle shape* you can see that *Ability to maintain a sharp edge* is slightly less than double the importance of *Handle shape* as it impacts the decision to purchase a particular knife. Clearly, an attribute that is likely to be selected as the most important from a list of many attributes 95.5% of the time, is very important.

Survival and outdoor recreation are very closely correlated while rescue is more loosely associated with the two. The total column is the average importance of features across all knife types and EDC knives track very closely with the total column. This makes sense since EDC knives are the least specialized of all the knife categories.

	Total ⁴ N=1434	Hunting N=195	Tactical N=200	Fishing N=206	Rescue N=196	Survival N=208	Outdoor Recreation N=208	Everyday Carry N=195
Ability to maintain a sharp edge	95.5%	94.4%	94.1%	94.4%	96.7%	97.9%	97.4%	95.3%
Can withstand hard use - durability	95.0%	95.3%	94.1%	94.1%	96.5%	96.4%	96.1%	94.8%
Appropriateness for the task	90.3%	89.8%	88.4%	87.3%	92.6%	92.5%	94.8%	89.5%
Comfort in hand	87.2%	86.1%	86.0%	86.8%	88.4%	88.5%	88.3%	87.7%
Blade material (e.g., steel, alloy, ceramic)	83.4%	80.9%	78.7%	80.1%	85.8%	87.4%	88.3%	83.4%
Blade shape (e.g., clip, drop, tanto)	73.6%	69.0%	68.9%	68.0%	76.7%	80.8%	77.9%	73.0%
Blade hardness	72.4%	68.7%	65.4%	66.3%	75.7%	79.0%	79.3%	73.2%
Made in the USA	71.7%	69.3%	69.5%	68.1%	73.0%	75.4%	74.7%	71.6%
Corrosion Resistance	71.2%	67.5%	61.8%	62.1%	74.8%	78.1%	84.3%	72.4%
Blade length	68.0%	64.6%	64.5%	63.9%	69.3%	72.2%	74.3%	67.6%
Lifetime replacement guarantee	64.4%	65.6%	58.7%	59.2%	65.2%	66.7%	70.3%	66.6%
Locking mechanism	61.8%	72.0%	73.5%	71.5%	55.4%	52.0%	47.8%	61.5%
One-handed opening	60.9%	73.2%	77.7%	78.9%	52.3%	45.6%	39.5%	60.3%
Balance	60.5%	54.5%	52.9%	58.4%	64.6%	66.7%	66.5%	60.3%
Opening action	60.0%	70.9%	76.7%	75.3%	51.4%	46.5%	40.1%	59.3%
Value	58.6%	59.5%	59.6%	51.1%	53.8%	60.9%	63.3%	60.9%
Warranty	54.9%	56.9%	54.5%	54.2%	53.9%	54.5%	54.3%	57.4%
Handle shape	52.5%	47.9%	46.0%	50.0%	56.4%	57.5%	57.5%	52.3%
Folder	49.0%	61.6%	68.3%	60.1%	38.4%	34.7%	30.8%	48.9%
Blade thickness	46.8%	40.8%	35.2%	39.1%	54.4%	54.8%	58.9%	45.4%
Comfort in pocket	46.1%	59.6%	65.0%	61.0%	36.8%	29.4%	26.0%	46.7%
Fixed blade	46.0%	32.7%	24.9%	32.4%	58.9%	62.5%	66.6%	44.8%
Overall length	45.0%	42.2%	43.2%	40.0%	45.4%	47.3%	51.3%	45.1%
Handle length	42.6%	39.9%	38.0%	38.7%	44.2%	45.9%	48.8%	42.9%
Weight	42.5%	43.1%	41.9%	39.2%	43.3%	42.9%	44.6%	43.2%
Handle material	40.1%	34.3%	33.4%	34.9%	43.1%	44.8%	46.8%	40.8%
Brand	39.7%	37.3%	41.0%	36.7%	39.3%	42.5%	35.6%	41.5%
Pocket clip	34.4%	44.0%	47.9%	47.7%	25.9%	22.0%	20.5%	33.4%
One-handed closing	33.6%	42.0%	43.1%	42.5%	27.7%	23.7%	23.0%	33.3%
Comes with a sheath	29.4%	20.3%	14.3%	17.2%	38.8%	43.1%	45.4%	27.0%
Overall looks (aesthetics)	28.5%	27.3%	33.7%	25.8%	24.8%	26.9%	23.4%	32.6%
Concealability	26.8%	32.1%	39.6%	46.0%	24.6%	13.9%	10.4%	21.8%
Can be used left handed	18.4%	17.0%	19.4%	22.1%	20.0%	15.2%	18.1%	18.2%
Can carry tip up or tip down	15.5%	17.1%	19.3%	20.9%	13.2%	11.5%	12.4%	14.5%
Designer	8.2%	7.7%	7.8%	7.3%	8.3%	6.9%	7.7%	8.4%
Rarity	5.0%	3.8%	4.3%	4.9%	4.0%	4.8%	4.8%	5.7%
Novelty	2.9%	1.9%	2.5%	3.1%	2.2%	2.7%	2.7%	3.3%

The features that tend to be of higher importance for hunting, tactical and fishing knives involve functionality associated with folding knives while features associated with hard usage and a fixed blade are more important for rescue, survival and outdoor recreation.

It is interesting to note that *Made in the USA* (71.7%) is more important to respondents than *Lifetime Replacement Guarantee* (64.6%), *Value* (58.6%) and *Warranty* (54.9%). *Brand* (39.7%) is not a primary driver relative to physical knife features nor are aesthetic qualities.

Attribute Importance by Knife Category	
Hunting, Tactical, Fishing	Rescue, Survival, Outdoor Recreation
Locking mechanism	Blade shape
One-handed opening	Blade hardness
Opening action	Corrosion resistance
Folder	Blade length
Comfort in pocket	Lifetime replacement guarantee
	Balance
	Value
	Fixed blade

Knife Usage Levels and Expectations for Longevity

Respondents were asked to think about their level of knife usage given a specific task. The categories are:

- **Very light use** - Shows little wear and tear. Blade remains sharp over time and handle shows little or no surface scratches.
- **Light use** - Shows some light wear over time. Blade will need sharpening occasionally and handle shows surface scratches.
- **Moderate use** – Used frequently and shows wear and tear. Handle shows scratches and some wear and blade must be sharpened regularly.
- **High use** – Used frequently but for tasks that the knife was designed to accomplish. The knife handle shows wear and tear and the knife blade shows wear and it is obvious the blade has been sharpened frequently.
- **Harsh use** – Used frequently and harshly for tasks that the knife may or may not have been designed for such as a prybar, chisel, hammer, etc. Shows extreme wear and tear. Blade is well worn and shows signs of frequent sharpening.

Most users report moderate use of their knives. Knives used for work, EDC, outdoor recreation and hunting tend to see higher levels of usage while knives used for self-protection and fishing tend to see lower levels of usage. More respondents who use their knives for work or survival reported submitting the knives to harsher use than those who use their knives for other activities.

Usage Levels Per Activity (%)						
	Mean ⁵	Very light use	Light use	Moderate use	High use	Harsh use
Work (Not Culinary) (N=581)	4.13	10.5	16.5	33.9	27.5	11.5
EDC (N=595)	3.99	8.4	22.4	37.5	25.5	6.2
Tactical/ Self-Protection (N=590)	3.28	32.7	26.9	22.2	14.6	3.4
Survival (N=579)	3.75	21.4	23.8	26.3	15.0	13.5
Hunting (N=599)	3.82	12.5	24.4	36.9	21.0	5.2
Fishing (N=597)	3.24	28.5	33.2	25.3	11.9	1.2
Outdoor Recreation (N=596)	4.02	9.2	21.8	36.4	23.2	9.4

Q11. Now we would like you to think about the activities you participate in using one or more knives. Using the scale below, indicate how you use your knife/knives, on average, while participating in each activity listed.

The majority of respondents expect their knives to last a minimum of 5 years up to a lifetime of use regardless of the type of knife. On average respondents expect their knives to last 10 years or more. Those who use their knives for hunting expect them to last the longest. Nearly half (45.9%) expect their knives to last a lifetime. A large proportion of those who use their knives for fishing (40.9) and self-protection (40.0) also expect their knives to last a lifetime. Those who use their knives for work have the lowest expectation for longevity.

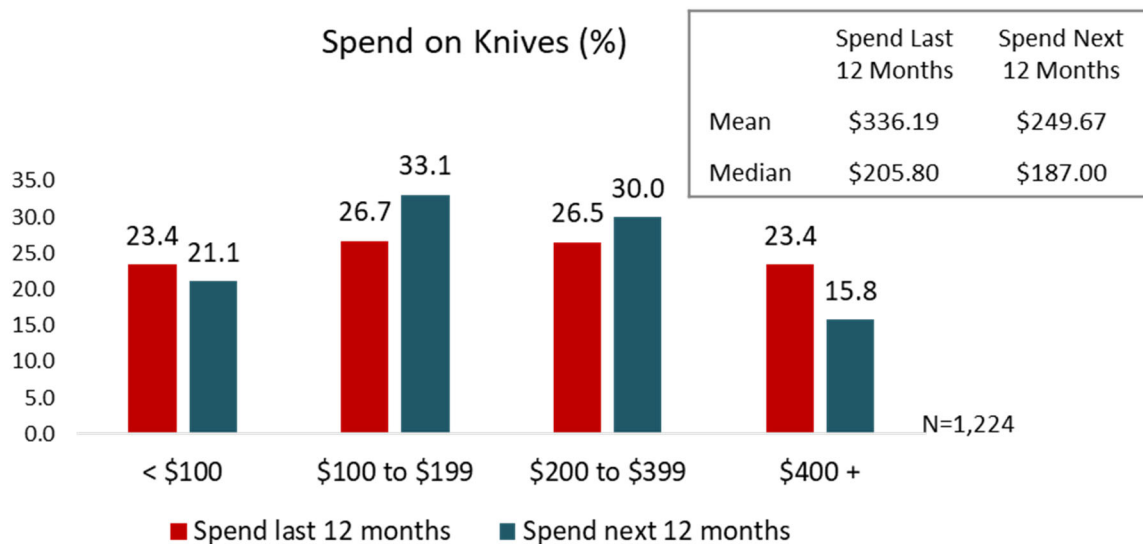
⁴Each usage level is assigned a value from 2 to 6 where 2 = Very light use, 3 = Light use, 4 = Moderate use, 5 = High use and 6 = Harsh use. The mean is then calculated based on users' responses for each knife type in the same way a mean would be calculated for a Likert-Type scale.

Expectations for Knife Longevity (%)								
	Mean ⁶	Less than 6 months	Less than 1 year	1 to 2 years	3 to 4 years	5 to 10 years	10 years or more	Lifetime
Work (Not Culinary) (N=581)	4.83	1.7	4.3	19.6	16.9	20.3	15.1	22.0
EDC (N=595)	5.40	1.2	0.8	9.6	15.3	22.2	20.2	30.8
Tactical/ Self-Protection (N=590)	5.72	0.5	1.5	5.8	11.2	19.5	21.5	40.0
Survival (N=570)	5.59	0.3	2.1	8.8	12.4	18.0	20.4	38.0
Hunting (N=599)	5.92	0.5	1.2	4.2	8.7	17.2	22.4	45.9
Fishing (N=597)	5.71	0.5	1.0	8.2	11.1	16.4	21.9	40.9
Outdoor Recreation (N=596)	5.49	0.3	1.8	8.7	12.2	23.3	21.5	32.0

Q12. For each activity listed below, how long do you expect a knife to last given your usage habits?

Purchase Activity and Spend

Respondents spent an average of \$336.19 on hunting and sporting knives in the past 12 months but project spending less in the next 12 months. Although the projected drop in spend appears to be significant, it must be noted that knives are often bought on impulse suggesting that planned purchases may be down but actual spend in the next 12 months may remain stable.

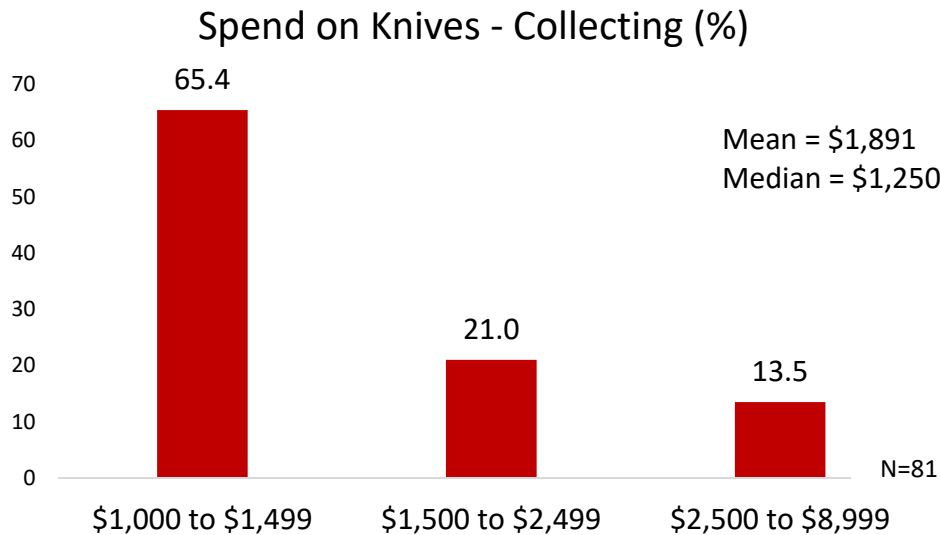


Q13 Approximately how much did you spend, in total, on knives purchased in the past 12 months?

Q15. How much do you intend to spend on knives in the next 12 months?

⁵⁻⁶ Each time category is assigned a value from 1 to 7 where 1 = Less than 6 months, 2 = Less than 1 year, 3 = 1 to 2 years, 4 = 3 to 4 years, 5 = 5 to 10 years, 6 = 10 years or more and 7 = Lifetime. The mean is then calculated based on users' responses for each knife type in the same way a mean would be calculated for a Likert-Type scale.

Those who collect knives spent an average of \$1,891 in the past 12 months on knives specifically for collecting.



Q13A. Approximately how much did you spend on knives specifically for collecting in the past 12 months?

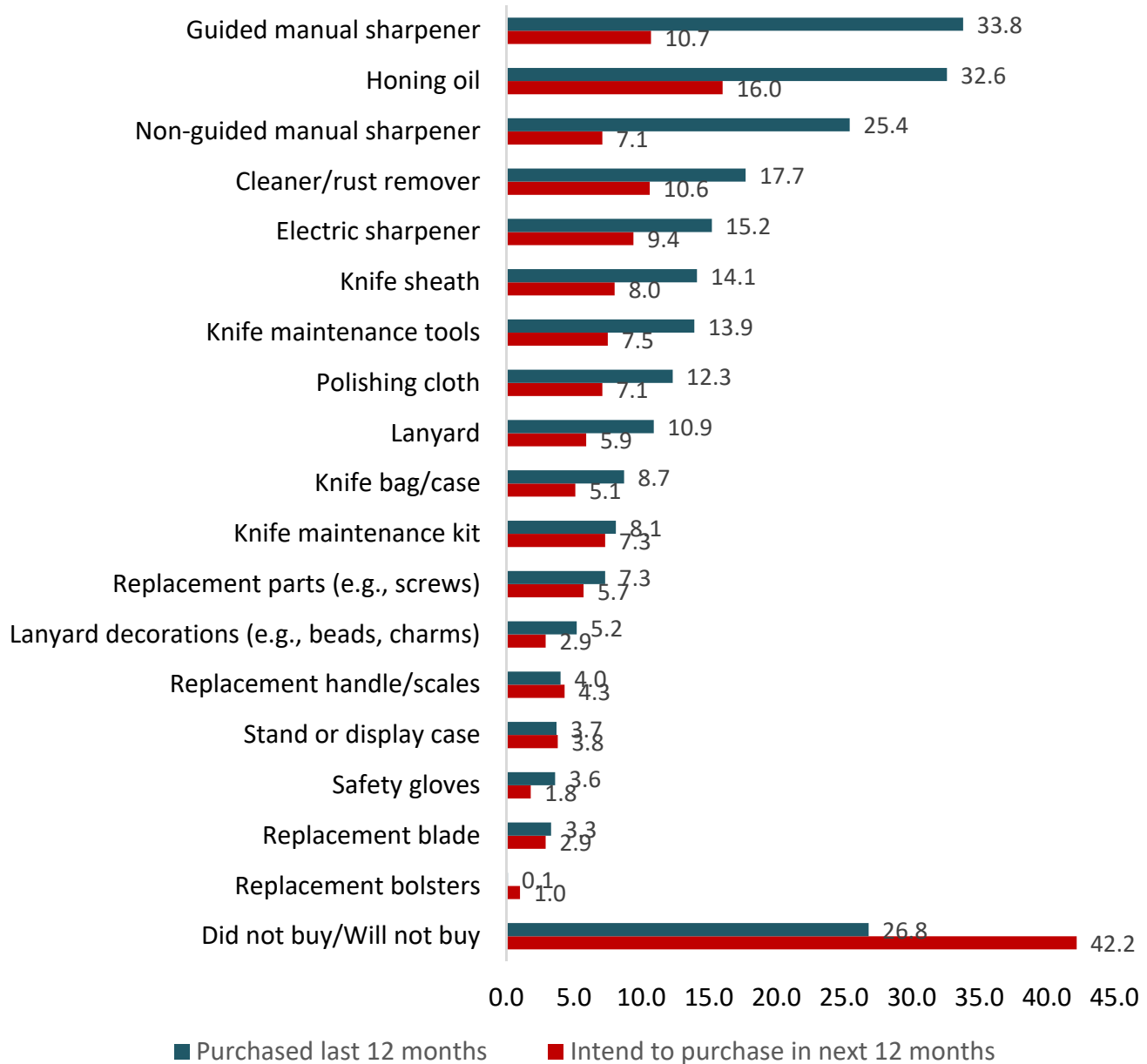
In keeping with the popularity of EDC knives among respondents, nearly three quarters (72.7%) plan to purchase an EDC knife sometime in the next 12 months. A third of respondents intend to purchase a tactical knife (32.6%) and slightly less than a third of respondents intend to purchase a hunting (30.7%) and outdoor recreation (27.6%) knife.



Q14. You indicated that you intend to purchase a knife in the next 12 months. What type of knife/knives do you intend to buy? Check all that apply.

The top five accessories purchased for knives are for knife maintenance. A third of respondents (33.8%) purchased a guided manual sharpener and a third (32.6%) purchased honing oil. Non-guided manual sharpeners (25.4%), cleaner/rust remover (17.7%) and electric sharpener (15.2%) round out the top five. A quarter of respondents (26.8%) indicated that they did not purchase any knife accessories in the past 12 months and 42.2% indicate they do not intend to purchase any accessories in the next 12 months. As with knives, accessory purchases are also driven, to a large extent, by impulse so the drop in intention to buy may not be as dire as it appears.

Knife Accessories - Purchased and Intention to Purchase (%)



Q16a. What equipment or accessories have you purchased to maintain or carry your knife/knives in the past 12 months? Select all that apply.

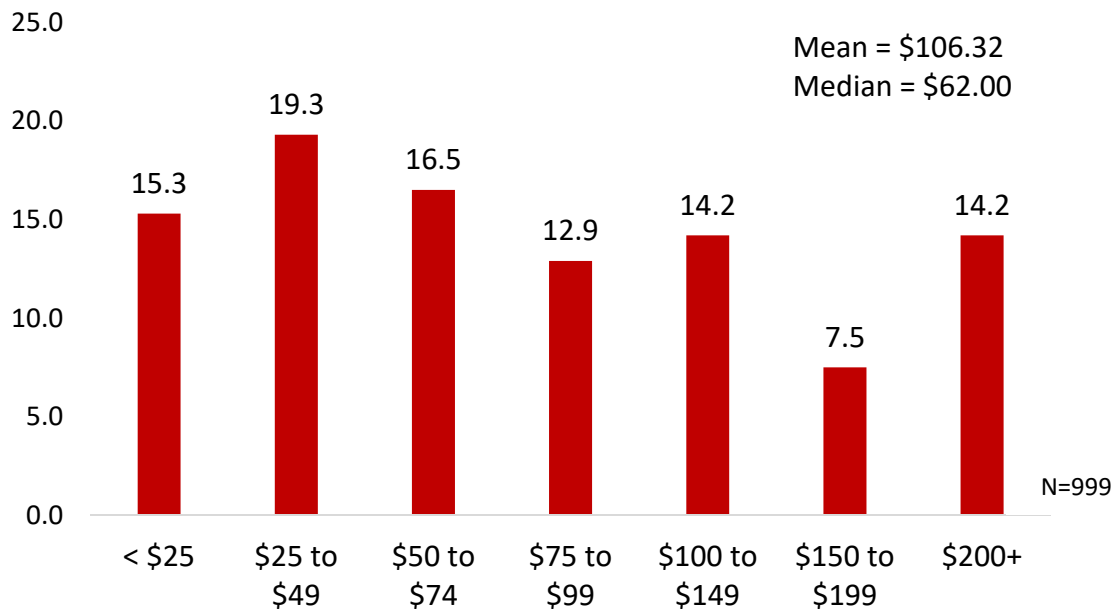
Q16b. What equipment or accessories do you intend to purchase in the next 12 months? Select all that apply.

Although sharpeners, maintenance kits and tools are durable items, 10% or more of those who purchased these items in the past 12 months intend to repurchase in the next 12 months. This is particularly true of knife maintenance kits and tools. Although these items are likely to last into the foreseeable future, they are generally affordable and they can be kept in various places (e.g., workbenches, backpacks, cars/trucks, boats) so that they are at the ready for any given activity.

Intend to Purchase in Next 12 Months (%)					
Purchased Past 12 Months		Guided manual sharpener	Non-guided manual sharpener	Maintenance kit	Maintenance tools
	Guided manual sharpener	10.6			
	Non-guided manual sharpener	6.9	11.3		
	Maintenance kit	8.7	11.6	15.5	
	Maintenance tools	9.5	11.6	14.5	18.9

Respondents spent an average of \$106.32 (median = \$62) on accessories in the past 12 months.

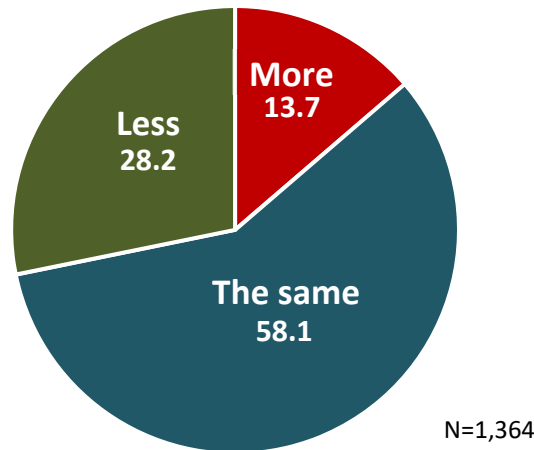
Spend on Knife Accessories in Past 12 Months (%)



Q17. Approximately how much did you spend in total in the past 12 months on equipment and accessories (not including knives) to carry and/or maintain your knife/knives?

Over half of respondents expect to spend the same on accessories in the coming 12 months and more respondents indicate they intend to spend less on accessories than those who intend to spend more suggesting a net loss in spend on accessories in the next 12 months. However, given that accessory purchases are, like knives, often impulse purchases, spend may remain stable over the coming year.

Spend on Accessories in Next 12 Months (%)



Q18. Do you expect to spend more, the same amount, or less on carry accessories in the next 12 months as compared to the last 12 months? I expect to spend...

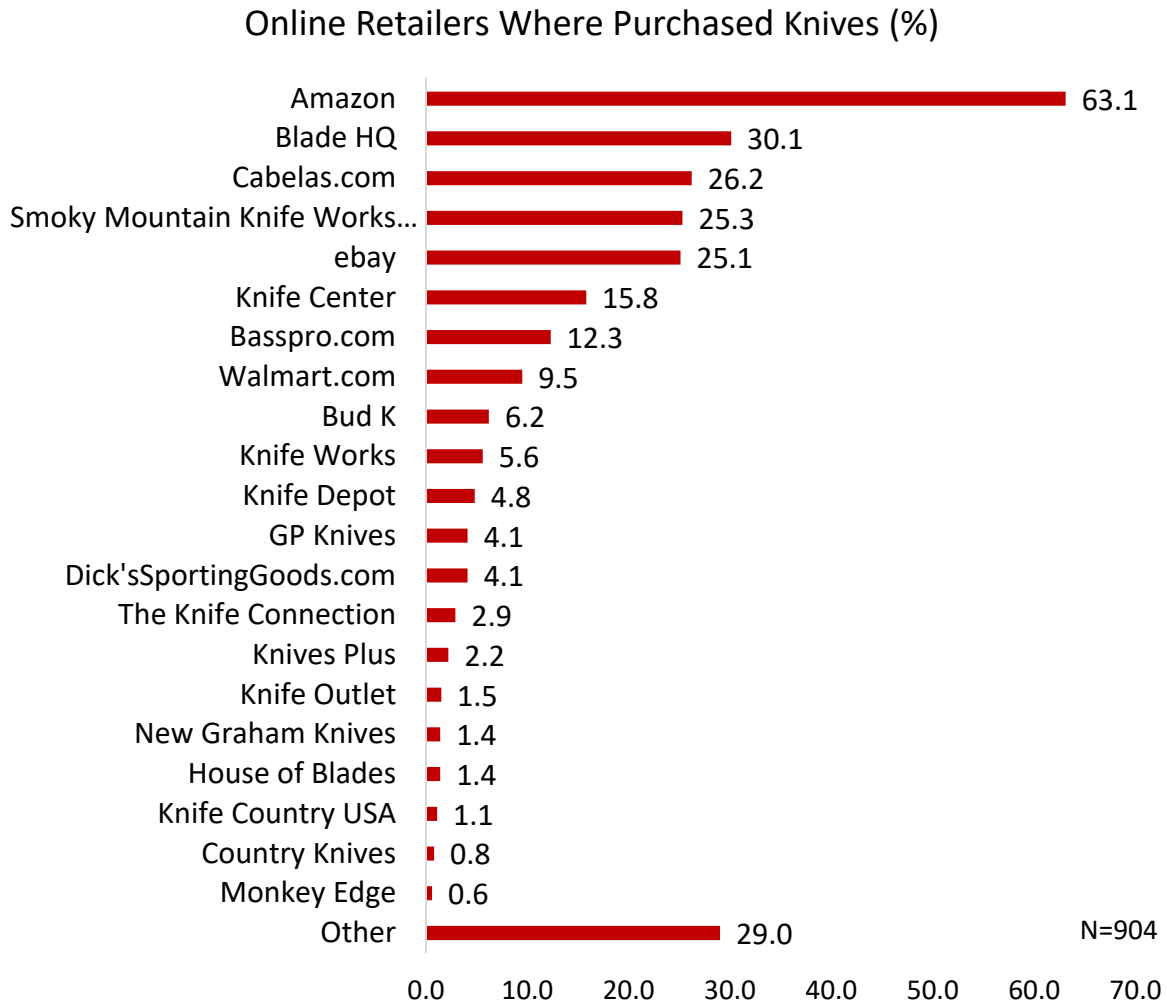
More than half (59.5%) of respondents purchased knives through outdoor specialty stores. Although 43.6% of respondents purchased one or more knives from online-only retailers and 42.9% purchased at least one from other types of online retailers (e.g., mass merchants, Amazon), half (51.1%) of respondents bought at least one knife from both types of online retailers. A third of respondents (34.8%) buy directly through manufacturers websites. Less than a third of respondents also purchased knives through local firearms shops (29.7%), mass merchants (27.5%), and general sporting goods stores (26.2%).

Where Knives Purchased (%)



Q19. From which of the following places have you purchased at least one knife? Check all that apply.

By far the most popular online retailer for knife purchases was Amazon (63.1%) with nearly two thirds of respondents reporting they bought at least one knife through them. Blade HQ (30.1%) was a distant second and Cabelas.com (26.2%), Smoky Mountain Knife Works (25.3%), and eBay (25.1%) were third.



Q20. From which of the following *online retailers* have you purchased at least one knife? Check all that apply.

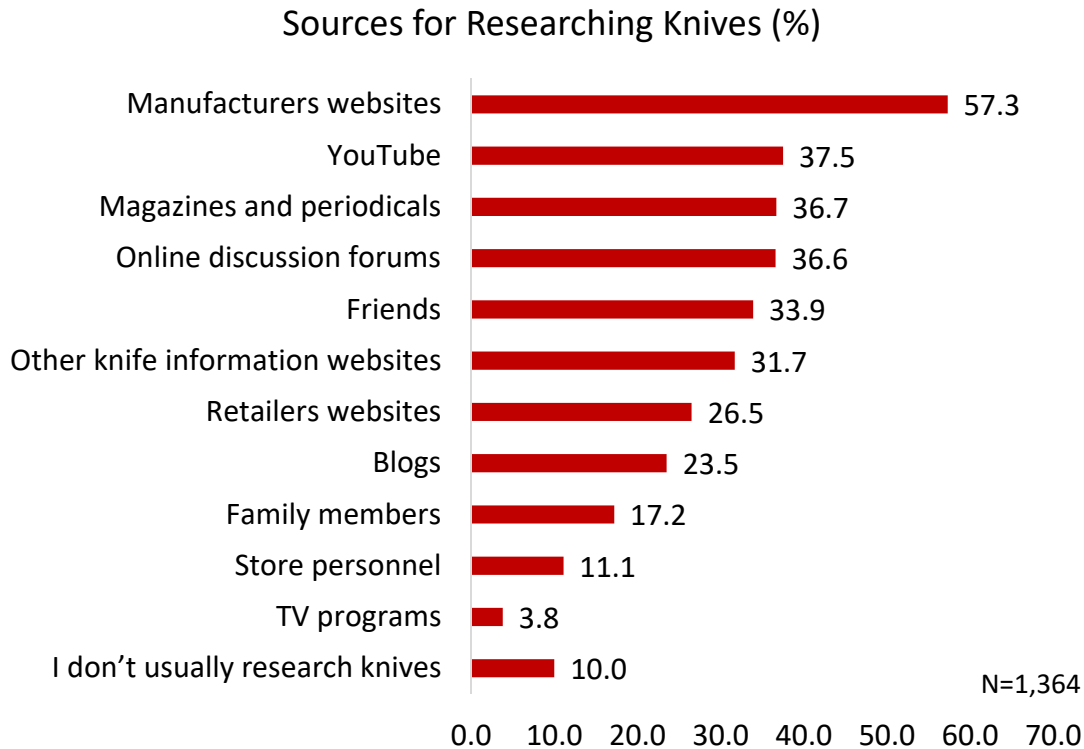
Nearly half (46.0%) of respondents purchased knife equipment and accessories from outdoor specialty stores and a third (33.0%) made purchases online from a mass merchant, Amazon, outdoor specialty store, general sporting goods stores, etc.

Where Purchased Equipment & Accessories (%)



21. From which of the following places have you purchased *knife equipment and/or accessories* (not including knives)? Check all that apply.

More than half (57.3%) of respondents' research knives on manufacturers websites. Respondents are also equally likely to reference YouTube (37.5%), magazines and periodicals (36.7%), online discussion forums (36.6%), friends (33.9%) and knife information websites (31.7%) not already listed.



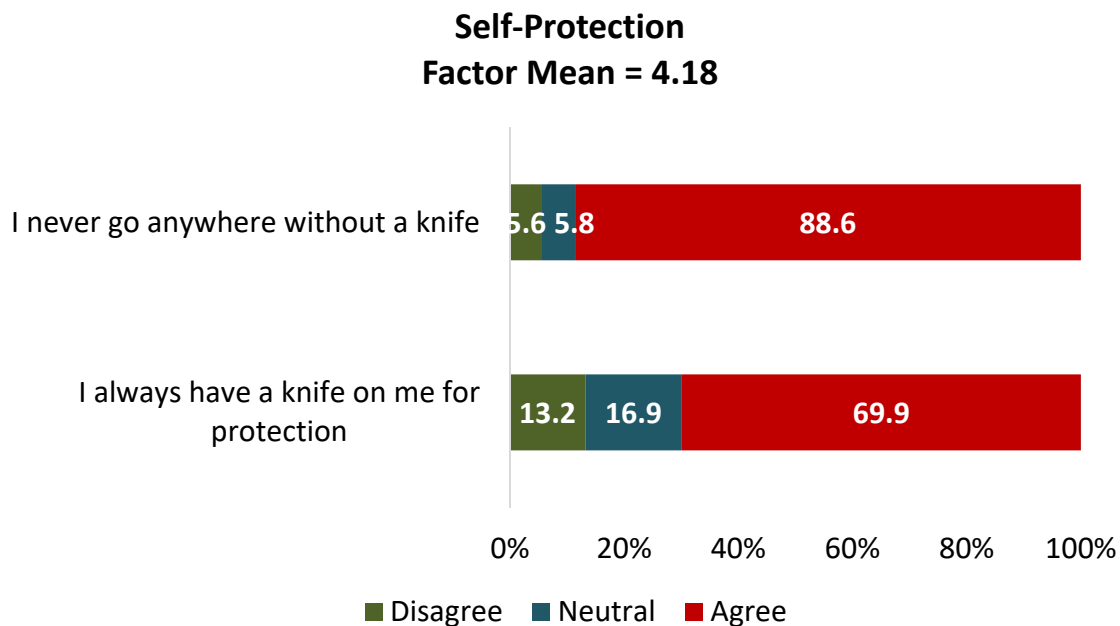
Q22. What sources of information do you use, if any, to research knives?

Attitudes and Opinions Regarding Knife Purchase, Ownership and Usage

Knife owners use, think and feel about their knives in myriad ways. Their attitudes about knives most assuredly impact what they buy, how much they spend and how they use and care for them. Respondents were asked to react to 28 statements by indicating their level of agreement or disagreement with each.⁷ The statement ratings were then statistically analyzed to develop groupings of statements that represented a concept. A total of six multi-item concepts (factors) were identified along with six statements that did not combine with others representing individual concepts or factors. A factor mean score is created by summing across the individual responses on each statement and creating an average. The factor mean indicates respondents' level of agreement on each concept as a whole. The factors are listed here by factor mean score (highest to lowest).

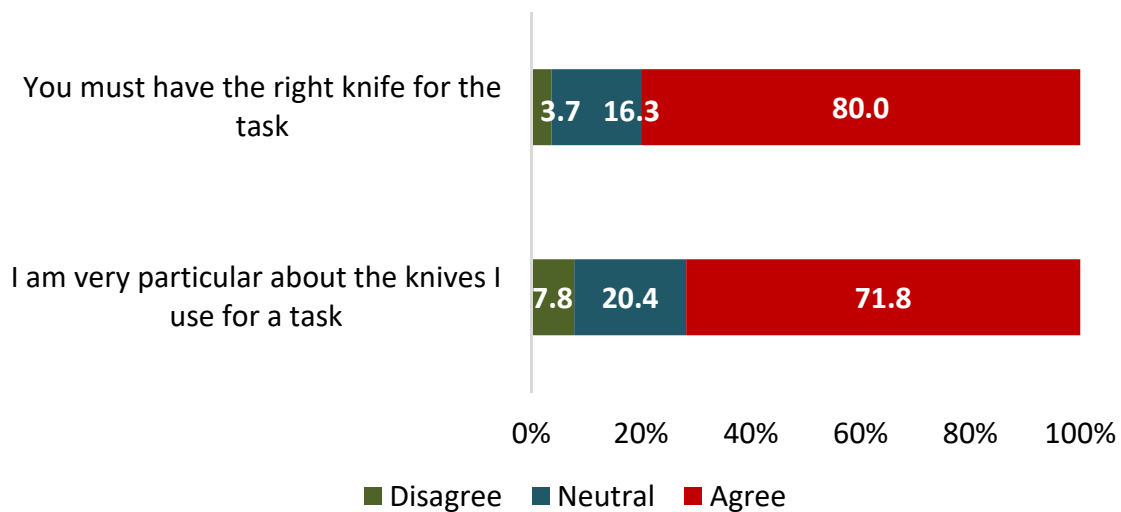
⁷ A 5-point Likert-type scale was used to ascertain agreement with statements. The scale points were 1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree or Disagree, 4 = Agree, and 5 = Strongly Agree. The Top-2 Box Percentage refers to the percentage of respondents who agree or strongly agree with a statement. The center is represented by respondents who indicated they neither agree nor disagree with a statement. The Bottom-2 Box Percentage is the percentage of respondents who disagree or strongly disagree with a statement.

The factor **Self-Protection** is comprised of two statements that directly and indirectly reference carrying a knife for self-protection, as the name suggests. The vast majority of respondents agreed with the statement *I never go anywhere without a knife* and two-thirds of respondents indicated they always have a knife on them for protection. Although the first statement does not automatically suggest that carrying a knife is exclusively for the purpose of protection – indeed many people carry knives for reasons other than protection – these two statements are highly correlated indicating that respondents associated always carrying a knife with self-protection.

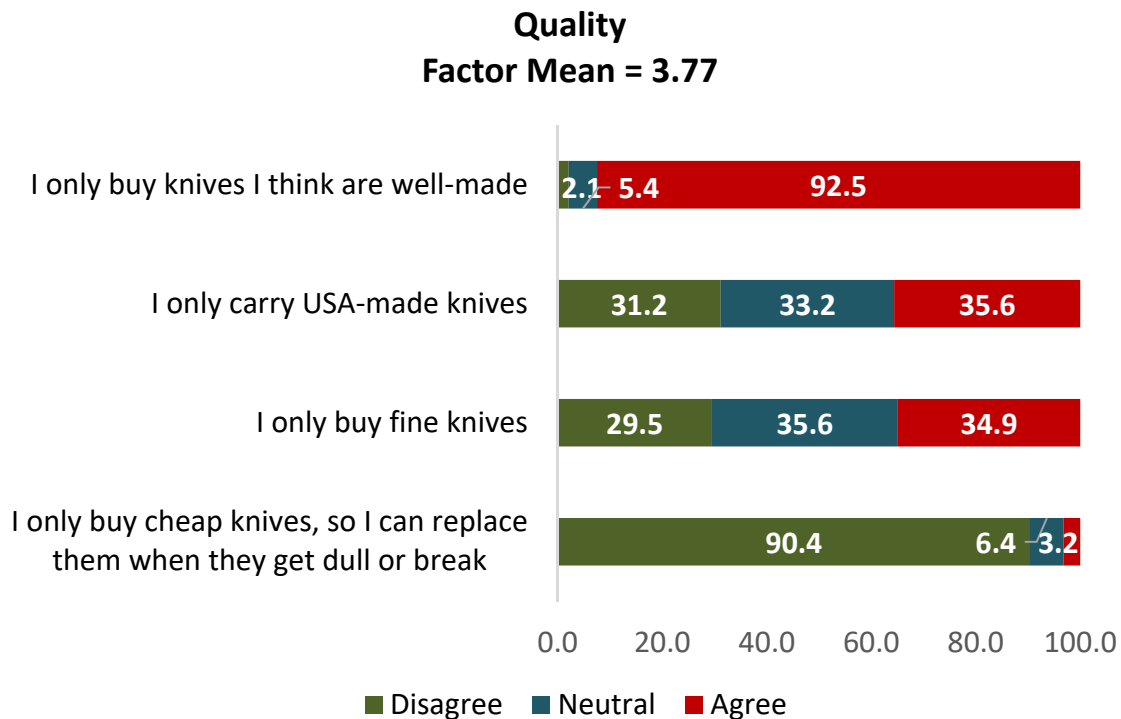


The overwhelming majority of respondents agreed that it was important to have the right knife for any given task but fewer respondents indicated they were particular about the knives used for a task. This suggests that respondents view knife types or categories as being important only to a point. A knife's intended purpose may be fluid in the minds of individuals and therefore, any knife may be considered appropriate for a given task if it's sturdy enough, has the proper configuration and readily available. This is consistent with earlier findings that consumers will use a knife intended for one purpose for something completely different.

Right Knife for the Task
Factor Mean = 3.95

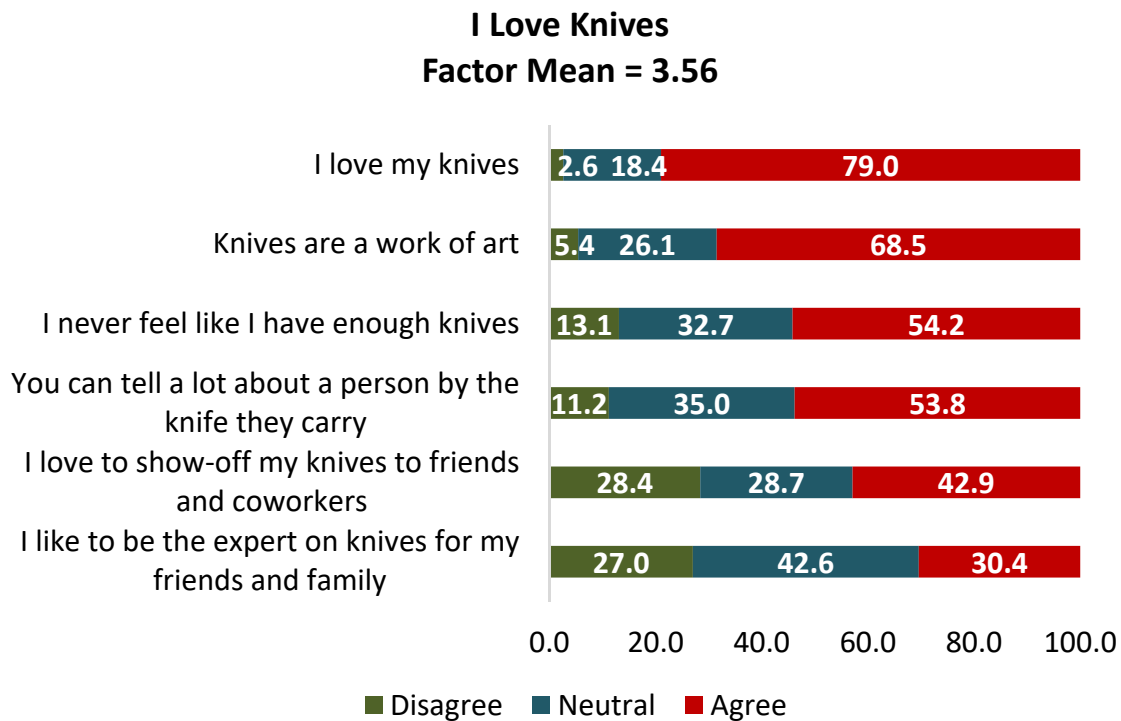


Nearly all respondents indicated that they only buy knives they think are well-made and nearly all respondents indicated they do not buy cheap knives so they can be readily replaced. However, only a third of respondents indicated they buy “fine”⁸ knives indicating that respondents do not equate quality with the characteristics that define a “fine” knife. Likewise, only a third of respondents indicated they only carry knives made in the USA. Earlier it was shown that respondents considered *Made in the USA* a very important feature when deciding on the purchase of a knife. However, only a third of respondents agreed that they only carry USA made knives. It is not clear why it would be an important factor in the purchase decision but not so for daily carry.



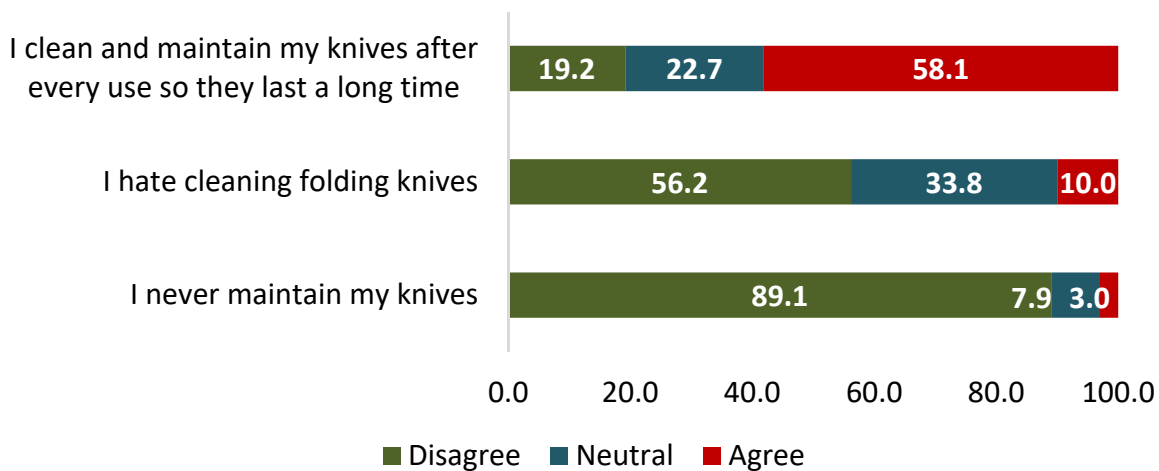
⁸ Fine, in this context, means a knife that is rare and/or exceptional in some way.

Unquestionably, the majority of respondents who participated in this study are bona fide knife fans. Nearly 80% of respondents agreed with the statement *I love my knives* and two thirds of respondents agreed with the statement *Knives are a work of art*. Over half of respondents never feel like they have enough knives. Slightly over half of respondents actively take notice of the knives others carry and feel they can tell a lot about that person based on their knife. As much as respondents love their knives only about a third like to act as a knife expert among friends and family.



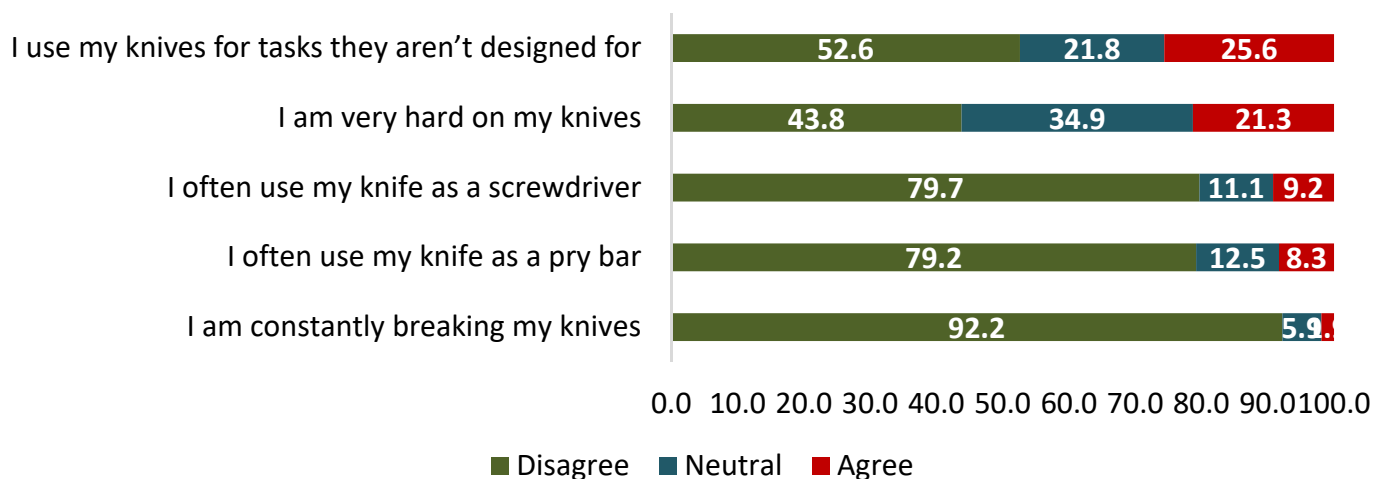
As much as respondents love their knives, they enjoy maintaining them considerably less. Although the vast majority of respondents (89.1%) disagreed with the statement *I never maintain my knives* and a little over half disagreed with the statement *I hate cleaning folding knives*, only a little more than half indicated they clean and maintain their knives after every use.

Knife Maintenance Factor Mean = 2.12



Most respondents deny abusing their knives. Only a quarter of respondents admit to using their knives for tasks they weren't designed for and fewer still admit to being very hard on their knives. Nearly 80% of respondents categorically deny using their knives as a screwdriver or pry bar and over 90% deny breaking their knives with regularity.

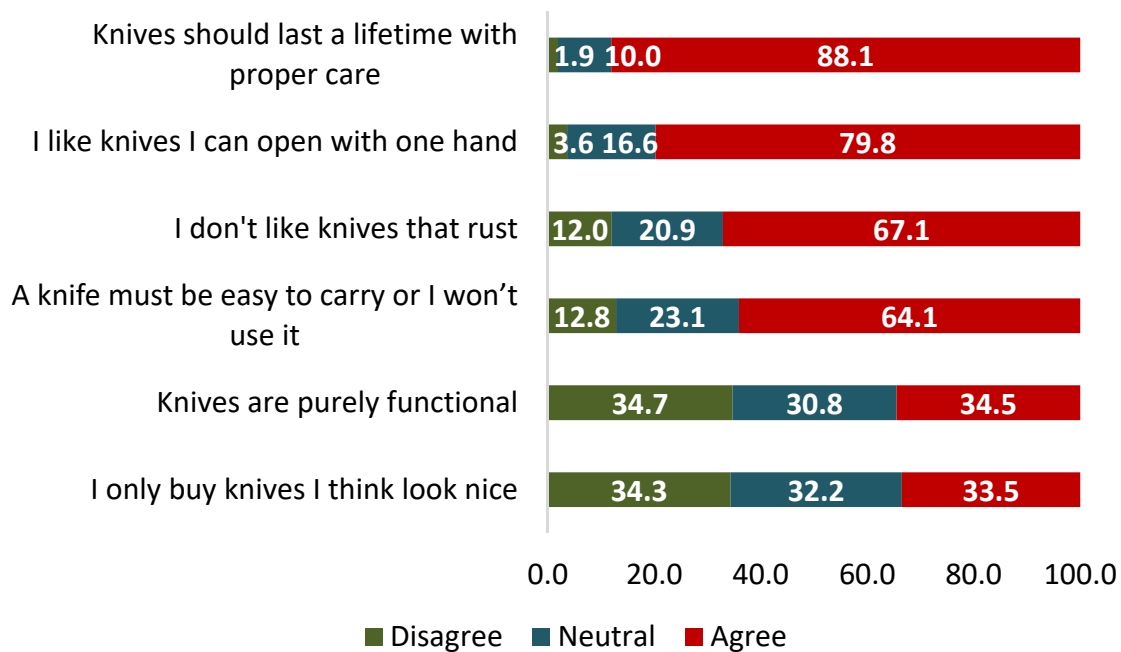
Knife Abuse Factor Mean = 2.08



The vast majority of respondents think that a knife should last a lifetime if maintained properly. The majority of those who use a folder want them to open with one hand. Two thirds of respondents do not like knives that rust and will not use a knife that isn't easy to carry.

Interestingly, respondents were split on whether knives are purely functional and on buying knives that they think look nice. A third of respondents agreed with these statements, another third disagreed and a third were neutral.

Stand-Alone Concepts



Key Subgroup Profiles

The following provides a snapshot of responses to select questions broken-out by key subgroups for comparison purposes. The items listed are only those that exhibit statistically significant ($\alpha = .05$) differences between groups unless otherwise noted. The highest value among subgroups is highlighted in blue. For subgroups with more than two categories, differences between subgroups are denoted by column letters. Certain categories such as average number of knives purchased and average spend are provided regardless of statistical significance because of their importance. If an item that does not have significant differences between subgroups is displayed, the cells are highlighted in green.

In some cases, seemingly large differences between subgroups are not statistically significant. This is a function of sample size and response variability.

Age

It is no surprise that older respondents own more knives. They have had many more years to obtain knives and generally have more discretionary income to apply towards the purchase of knives. However, younger respondents use their knives more frequently for work, everyday carry, self-protection and survival and, consequently, they do not expect their knives to last as long as older consumers.

The youngest respondents purchased more accessories in the past 12 months than those 35 and older and, in general, the youngest respondents intend to purchase more knives and accessories in the next 12 months relative to other age groups. Younger respondents made more purchases online than the older respondents but the older group still make purchases through printed catalogs. Younger respondents are also more likely to obtain information about knives and accessories through online resources while the oldest respondents were more likely to use magazines and periodicals for this purpose.

Younger respondents are more likely to carry a knife for self-defense and prefer a knife that can be opened with one hand. They are also more passionate about knives. However, younger respondents are more likely to abuse their knives and are less likely to maintain them.

	Ages 18 to 34 (n=180) (a)	Ages 35 to 54 (n=554) (b)	Ages 55 to 64 (n=353) (c)	Ages 65+ (n=277) (d)
Mean number of knives owned	11.2	12.4 ^a	12.9 ^a	14.1 ^{abc}
Frequency of use	Daily/ Weekly ^{cd}	Daily/ Weekly ^{cd}	Weekly/ Monthly	Weekly/ Monthly
Mean number of knives owned by type				
Hunting	2.7	4.1 ^a	5.0 ^{ab}	6.1 ^{abc}
Tactical	2.8	3.3	3.3	4.0 ^{abc}
Fishing	1.0	1.8 ^a	2.3 ^{ab}	2.6 ^{ab}
Rescue	0.8	1.0	1.0	1.4 ^{abc}
Survival	1.7	2.2 ^a	2.2 ^a	3.2 ^{abc}
Outdoor recreation	2.3	2.9	3.5 ^a	4.3 ^{ab}
Everyday carry	5.3	5.4	5.7	6.9 ^{abc}
Collectors – Mean knives in collection	35.0	43.1	46.1	61.0 ^{ab}

Mean level of knife usage ⁸				
Work	4.3 ^d	4.2 ^d	4.2	3.9
Everyday carry	4.1	4.1 ^c	3.8	3.9
Tactical/Self-protection	3.4 ^d	3.3 ^d	3.3	3.0
Survival	4.2 ^{bcd}	3.7 ^d	3.8	3.4
Mean length of time knife is expected to last ⁹				
Work	4.6	4.7	5.0 ^b	5.1 ^{ab}
Everyday carry	5.3	5.3	5.5	5.6 ^b
Tactical/Self-protection	5.4	5.6	6.0 ^{ab}	5.9 ^{ab}
Survival	5.1	5.5 ^a	5.8 ^a	5.8 ^a
Hunting	5.5	5.8	6.2 ^{ab}	6.0 ^{ab}
Outdoor recreation	5.1	5.4	5.7 ^{ab}	5.6 ^a
Mean spend on knives in past 12 months	\$394.43	\$325.83	\$322.81	\$333.73
Mean spend on knives for collecting in past 12 months	\$1,921	\$1,783	\$1,680	\$2,279
Type of knife intend to purchase in next 12 months				
Tactical	42.2 ^{bcd}	32.3	30.6	29.2
Fishing	12.8 ^d	9.0	10.2	7.2
Survival	25.6 ^c	20.6 ^c	14.7	20.9 ^c
Everyday carry	81.1 ^{bcd}	73.1	69.4	70.4
Equipment/accessories purchased in past 12 months to maintain or carry knives				
Cleaner/rust remover	22.8 ^b	15.0	15.9	22.4 ^{bc}
Guided manual sharpener	34.4	35.6 ^c	29.2	35.7 ^c
Knife bag/case	13.9 ^{bc}	7.2	7.6	9.7
Knife maintenance kit	11.7 ^c	8.1	5.7	8.7
Knife maintenance tools	28.9 ^{bcd}	12.1	9.9	13.0
Knife sheath	18.9 ^c	13.2	12.2	15.5
Polishing cloth	13.9	9.7	12.5	16.2 ^b
Replacement handle/scales	7.8 ^{bcd}	4.0	3.7	2.2
Replacement parts (e.g., screws)	20.0 ^{bcd}	6.7	4.0	4.3
Stand or display case	6.1 ^b	2.5	4.0	4.3
Equipment/accessories intend to purchase in next 12 months				
Cleaner/rust remover	17.2 ^{bcd}	9.4	9.6	10.1
Electric sharpener	10.6 ^d	11.0 ^d	9.6 ^d	5.1
Knife bag/case	7.8 ^c	5.4	3.1	5.4
Knife maintenance kit	17.2 ^{bcd}	6.7	5.4	4.7
Knife maintenance tools	13.3 ^{bcd}	6.5	5.9	7.6

⁸ Each usage level is assigned a value from 2 to 6 where 2 = Very light use, 3 = Light use, 4 = Moderate use, 5 = High use and 6 = Harsh use. The mean is then calculated based on users' responses for each knife type in the same way a mean would be calculated for a Likert-Type scale.

⁹ Each time category is assigned a value from 1 to 7 where 1 = Less than 6 months, 2 = Less than 1 year, 3 = 1 to 2 years, 4 = 3 to 4 years, 5 = 5 to 10 years, 6 = 10 years or more and 7 = Lifetime. The mean is then calculated based on users' responses for each knife type in the same way a mean would be calculated for a Likert-Type scale.

Knife sheath	11.1 ^c	7.4	6.2	9.4
Replacement parts (e.g., screws)	8.9 ^d	6.5 ^d	5.4	2.5
Safety gloves	0.0	1.8	1.4	3.6 ^a
No plan to buy knife equipment/accessories	35.6	42.1	42.2	46.9 ^a
Mean spend on equipment/accessories in past 12 months	108.44	106.45	102.97	108.73
Expected spend on equipment/accessories in next 12 months				
More	17.8 ^d	14.8 ^d	13.6	9.0
Less	26.7	27.6	23.8	35.7 ^{abc}
Where purchased knives in the past				
Mass Merchant	28.3 ^d	33.6 ^{cd}	24.9 ^d	18.1
Outdoor Specialty Store	65.0 ^d	61.0 ^d	61.2 ^d	50.5
Printed Catalog – Outdoor Specialty Store	12.2	15.0	17.6	24.9 ^{abc}
Online-only retailer	55.6 ^{bcd}	44.8	39.9	38.3
Online from a Mass Merchant, Amazon, Outdoor Specialty Store, General Sporting Goods Store, or local gun shop	50.0 ^{cd}	43.1	40.8	40.4
Knife shows or expos	16.7	19.9	23.8	25.6 ^a
Online retailers where purchased knives				
Amazon	73.5 ^c	66.9 ^{cd}	56.1	56.2
Blade HQ	44.1 ^{bcd}	33.1 ^{cd}	21.5	24.2
ebay	17.6	25.7	26.3	28.1 ^a
GP Knives	8.8 ^{bcd}	3.6	3.9	1.7
Monkey Edge	2.9 ^{bcd}	0.3	0.0	0.0
Smoky Mountain Knife Works (smkw.com)	14.7	22.7	30.7 ^{ab}	32.0 ^{ab}
Where purchased equipment/accessories				
Mass Merchant	22.8	32.1 ^{ad}	26.1	24.9
Printed Catalog – Outdoor Specialty Store	7.8	7.4	9.6	19.1 ^{abc}
Online from a Mass Merchant, Amazon, Outdoor Specialty Store, General Sporting Goods Store, or a local gun shop	38.3 ^c	33.2	28.6	34.7
Manufacturers websites	18.9	14.8	18.4	20.6 ^b
General Sporting Goods	14.4	15.7	17.6	23.1 ^{ab}
Knife shows or expos	9.4	8.1	12.5 ^b	17.0 ^{ab}
Information sources used to research knives				
Blogs	36.7 ^{bcd}	25.3 ^c	16.4	20.6
Family members	25.6 ^{cd}	19.1 ^d	14.2	11.9
Friends	39.4 ^d	36.5 ^d	32.9	26.4
Magazines and periodicals	31.1	32.7	36.0	49.5 ^{abc}
Manufacturers websites	63.9 ^b	53.4	59.2	58.5
Online discussion forums	55.0 ^{bcd}	37.5 ^d	33.7 ^d	26.4
Other knife information websites	41.1 ^{bc}	27.3	30.3	36.1 ^b
TV programs	6.7 ^c	4.0	2.8	2.9
YouTube	62.2 ^{bcd}	42.1 ^{cd}	28.0	24.2
Store personnel	18.3 ^{bcd}	9.9	9.6	10.5
I don't usually research knives	6.7	9.2	12.7 ^a	10.1

Attitudes – Factor Means				
Self-Protection	4.31 ^c	4.25 ^c	4.03	4.14
Quality	3.66	3.76	3.82 ^a	3.80 ^a
I Love Knives	3.87 ^{bcd}	3.63 ^{cd}	3.40	3.42
Knife Maintenance	2.36 ^{bcd}	2.24 ^{cd}	2.06	2.02
Knife Abuse	2.40 ^{bcd}	2.18 ^{cd}	2.01 ^d	1.78
I like knives I can open with one hand	4.33 ^{bcd}	4.18 ^{cd}	3.94	3.93

Geographic Region

The highest level of knife ownership and purchase activity is taking place in the Midwest and West and the lowest level of activity is occurring in the Northeast. Respondents in the Midwest own the most knives (mean=13.2) overall and also own more hunting, fishing and knives for collecting than other regions.

Those in the West own more tactical and outdoor recreation knives, spent more on knives in the past 12 months and expect to spend more in the coming 12 months. They also bought more accessories in the past 12 months.

	Northeast (n=165) (a)	Midwest (n=294) (b)	West (n=376) (c)	South (n=529) (d)
Mean number of knives owned	12.3	13.2 ^a	12.8 ^a	12.5 ^{abc}
Mean number of knives owned by type				
Hunting	4.0	5.5 ^{acd}	4.4	4.3
Tactical	2.7	3.3	3.6 ^a	3.4
Fishing	1.8	2.5 ^{acd}	1.9	1.8
Outdoor recreation	2.9	3.5	3.7 ^d	3.0
Collectors – Mean knives in collection	33.6	52.7 ^a	45.3	48.2
Mean level of knife usage – Tactical/Self-protection ¹⁰	3.1	3.4 ^a	3.3	3.3
Mean length of time knife is expected to last ¹¹				
Hunting	6.3 ^{cd}	6.0	5.8	5.8
Fishing	5.6	6.0 ^{ad}	5.8	5.6
Outdoor Recreation	5.7 ^c	5.7 ^c	5.4	5.4
Mean spend on knives in past 12 months	\$307.88	\$333.36	\$398.79 ^d	\$301.22
Type of knife intend to purchase in next 12 months				

¹⁰ Each usage level is assigned a value from 2 to 6 where 2 = Very light use, 3 = Light use, 4 = Moderate use, 5 = High use and 6 = Harsh use. The mean is then calculated based on users' responses for each knife type in the same way a mean would be calculated for a Likert-Type scale.

¹¹ Each time category is assigned a value from 1 to 7 where 1 = Less than 6 months, 2 = Less than 1 year, 3 = 1 to 2 years, 4 = 3 to 4 years, 5 = 5 to 10 years, 6 = 10 years or more and 7 = Lifetime. The mean is then calculated based on users' responses for each knife type in the same way a mean would be calculated for a Likert-Type scale.

Tactical	24.8	32.7	33.8 ^a	34.0 ^a
Outdoor recreation	19.4	27.9 ^a	35.1 ^{abd}	24.6
Mean spend intention on knives next 12 months	\$228.98	\$252.87	\$283.05 ^{ad}	\$230.62
Equipment/accessories purchased in past 12 months to maintain or carry knives				
Electric sharpener	10.9	16.0	18.6 ^a	13.8
Knife maintenance tools	13.9	13.6	18.1 ^d	11.2
Lanyard	9.1	8.2	13.0 ^b	11.5
Replacement parts	6.7	6.5	10.1 ^d	5.9
Stand or display case	6.1 ^d	4.8	3.5	2.6
Mean spend on equipment/accessories in past 12 months	\$119.08	\$106.10	\$109.15	\$100.43
Where purchased knives in past				
General sporting goods	21.2	28.2	30.3 ^{ad}	23.6
Knife shows or expos	15.8	24.5 ^{ac}	14.6	26.8 ^{ac}
Online retailers where purchased knives				
Amazon	60.5	61.4	68.9 ^d	60.8
Dick's Sporting Goods	7.6 ^c	2.7	2.9	4.5
Knife Country USA	0.8	2.2 ^d	1.6	0.3
Knife Outlet	0.0	3.3 ^{ac}	0.4	2.0
Smokey Mountain Knife Works	16.8	29.3 ^{ac}	20.1	29.7 ^{ac}
Where purchased equipment/accessories				
Mass merchant	20.6	26.2	22.1	35.2 ^{abc}
Outdoor specialty store	35.2	47.3 ^a	48.7 ^a	46.9 ^a
General sporting goods	13.9	17.7	21.5 ^{ad}	15.7
Knife shows or expos	7.9	12.9 ^c	6.9	14.4 ^{ac}
Information sources used to research knives				
Store personnel	7.9	9.5	14.1 ^{ab}	10.8
I don't usually research knives	15.8 ^{bc}	7.5	8.2	10.8
Attitudes – Factor Means				
Self-protection	4.0	4.1	4.2	4.3 ^a

Income

Those with the highest income spent significantly more on knives in the past 12 months and intend to spend more on knives in the coming 12 months than those with lower incomes. However, they do not own more knives than other income groups. They also tend to purchase more from Amazon and directly through manufacturers websites.

Those with an income less than \$50K are more passionate about knives and feel more strongly about carrying a knife for self-protection.

	Income <\$50K (n=171) (a)	Income \$50K to <\$100K (n=444) (b)	Income \$100K+ (n=534) (c)
Mean number of knives owned	12.6	12.7	12.6
Collectors – Mean knives in collection	44.3	49.5	47.5
Mean spend on knives in past 12 months	\$295.96	\$307.09	\$387.61 ^{ab}
Mean spend on knives for collecting in past 12 months	\$1,340	\$1,967	\$1,851
Type of knife intend to purchase in next 12 months			
Survival	26.3 ^c	20.5	17.2
Mean spend intention on knives next 12 months	226.12	228.33	281.79 ^{ab}
Equipment/accessories purchased in past 12 months to maintain or carry knives			
Electric sharpener	9.4	15.5 ^a	16.5 ^a
Knife bag/case	12.9 ^c	8.6	6.6
Equipment/accessories intend to purchase in next 12 months			
Cleaner/rust remover	12.3	12.8 ^c	8.2
Electric sharpener	4.7	9.5	11.2 ^a
Guided manual sharpener	15.2 ^c	12.2 ^c	8.2
Honing oil	17.5	18.5 ^c	13.1
Stand or display case	8.2 ^{bc}	3.8	2.8
Mean spend on equipment/accessories in past 12 months	\$98.00	\$103.26	\$110.01
Where purchased knives in the past			
Mass Merchant	33.9 ^c	30.0 ^c	21.9
Online-only retailer	53.2 ^{bc}	39.4	43.1
Online auction sites	16.4 ^c	12.8	9.2
Manufacturers websites	26.9	32.9	38.4 ^a
Online retailers where purchased knives			
Amazon	55.4	61.4	65.5 ^a
Bud K	11.6 ^{bc}	5.5	5.5
Knife Outlet	1.7	0.3	2.9 ^b
Knife Works	8.3 ^c	5.5	3.5
The Knife Connection	7.4 ^c	3.4	2.0
Where purchased equipment/accessories			
Mass Merchant	32.7 ^c	27.9	24.3
Online-only retailer	15.2	11.3	15.9 ^b
Manufacturers websites	11.1	16.4	20.4 ^a
Local firearms shop	12.9	13.1	20.2 ^{ab}
Attitudes – Factor Means			
Self-Protection	4.3 ^c	4.3 ^c	4.1
Quality	3.6	3.7	3.8 ^{ab}
I Love Knives	3.7 ^{bc}	3.6	3.5

I don't like knives that rust	3.7	3.8	3.9 ^{ab}
A knife must be easy to carry or I won't use it	3.6	3.6	3.7 ^a

Appendix A: About Maximum Difference Scaling (MaxDiff)

Consumers make purchases for many reasons, some more important than others. When researchers try to measure the influence of various attributes (e.g., motivations, prices, brands, images, characteristics) on the decision, they will often employ rating scales or rankings. There are many known issues with both ratings and rankings.

Rating scales often result in respondents rating everything high or low. This may occur for a number of reasons but the results are the same; information with limited usefulness. There are also known biases in scales. Raters can have a “hard” rating bias, in other words they tend to be very difficult to please and provide a low rating to most items. Likewise, there are “easy” raters who tend to provide higher ratings to every item. There are also known cultural biases. For example, Hispanic respondents tend to provide higher ratings because they feel it is the polite thing to do. This all results in the same thing; poor quality data.

Rankings can be difficult for respondents to handle unless the list of items to be ranked is short. The distance between ranks is not typically equal but you cannot discern how similar or dissimilar items are based solely on the ranks.

One way to avoid the issues surrounding scales and rankings is to forego the rating process altogether in favor of a Maximum Difference Scaling task commonly referred to as MaxDiff. A MaxDiff task is comprised of several individual scenarios. Each scenario is made up of a unique combination of several attributes and the respondent is asked to pick the one attribute that has the most of something and the one attribute that has the least of something. In this case, we asked respondents what was most important in their purchase decision and what was least important in their purchase decision.

The set of scenarios is carefully constructed utilizing an experimental design so that when the results from all of the scenarios are combined and analyzed, the entire set of possible orderings can be estimated. To assure that a robust model can be built, several decks of individual scenarios are developed and respondents are randomly assigned to evaluate a single deck. The number of attributes per scenario, the total number of scenarios, and the number of total decks will ultimately depend on sample size and the number of attributes that are tested. The MaxDiff task was comprised of the following:

	Task
No. of attributes	37
No. of decks	10
No. of scenarios per deck	10
No. of attributes per scenario	8

An example of a MaxDiff task scenario is shown below.

From the list below, please select the most important reason for deciding to purchase a knife for **Outdoor recreation** and then select the reason that is least important in deciding to purchase a knife for **Outdoor recreation**.

Task 1 of 10

+ Most Important		- Least Important
<input type="radio"/>	Balance	<input type="radio"/>
<input type="radio"/>	Lifetime replacement guarantee	<input type="radio"/>
<input type="radio"/>	Appropriateness for the task	<input type="radio"/>
<input type="radio"/>	Can withstand hard use - durability	<input type="radio"/>
<input type="radio"/>	Concealability	<input type="radio"/>
<input type="radio"/>	Blade thickness	<input checked="" type="radio"/>
<input checked="" type="radio"/>	Ability to maintain a sharp edge	<input type="radio"/>
<input type="radio"/>	Blade material (e.g., steel, alloy, ceramic)	<input type="radio"/>

Continue

MaxDiff results are scaled between 0% and 100%. The values are transformed or “standardized” so that the values can be compared directly with each other to obtain relative importance. For example, a score of 80.0% for one attribute indicates it is twice as important as an attribute with a corresponding score of 40%.

The percentages are interpreted a little differently than one might ordinarily interpret percentages in a list. A percentage corresponding to a specific attribute represents the **likelihood** that it will be selected when it is present in a list of many attributes. So, to use our results as an example, the 95.5% associated with *Ability to maintain a sharp edge* can be interpreted to mean that when *Ability to maintain a sharp edge* was among the attributes presented to respondents in a particular scenario, it was likely to be selected as the most important attribute 95.5% of the time. Another attribute *Handle shape* has a value of 52.5% associated with it. This means that when *Handle shape* was presented in a list of attributes, it had a likelihood of being selected as the most important only 52.5%. Comparing *Ability to maintain a sharp edge* with *Handle shape* you can see that *Ability to maintain a sharp edge* is slightly less than double the importance of *Handle shape* as it impacts the decision to purchase a particular knife. Clearly, an attribute that is likely to be selected as the most important from a list of many attributes 95.5% of the time, is very important.

Advantages to utilizing a MaxDiff task are many:

- Very large numbers of attributes can be effectively tested without unduly taxing respondents.
- Completion of the survey task is very easy for the respondent, requiring little intellectual effort.
- The respondent is not providing ratings or rankings. They are simply making selections so it is impossible to straightline or in other ways game the system.

- Due to the type of questioning (no ratings or rankings, but only best/most vs. worst/least) the results are very robust. There are no cultural influences, such as is usually the case with numerical ratings
- The method delivers individual item values for each respondent. The results can thus be used for the investigation of specific sub-segments of the target group.

