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Susie Smith



Joe Robinson



Demographic Profile

Age: 60

Gender: Female

Income: \$50,000 - \$60,000

Marital status: Divorced/single

Disability: Arthritis

Demographic Profile

Age: 40

Gender: Male

Income: \$50,000 - \$60,000

Marital status: Divorced/Single

Disability: Arthritis

Quote:

“Since I have no one to help me with my projects I need something light weight and hands free. Something that can stand on its own and allow me to simply direct its beam would be a need.”

Psychographic Profile

I am divorced and live alone. My children have moved out. I do all of the house work on my own. When I'm not repairing the house I usually have fun home projects of my own. These projects could be building a

book case from scratch or just assembling new furniture from IKEA. My work and projects get pretty intense. An example would be when working/or looking for things in the garage, basement, or underneath the sink, I use tools like a wrench or hammer and drop them often. I break tools and flashlights all the time. They just don't make things like they used to. I believe that if you want something done right, you have to do it yourself. The only thing holding me back from my projects is Arthritis. It makes my joints inflamed and harder to bend. Simple tasks become harder for me to do. Usually these tasks consist of gripping, twisting, pushing, and pulling. These actions also take effect when I'm using a flashlight. Like when I have to push the button, twist a cap, and pull something off of the flashlight. The smaller amount of movement, the better.

Product use scenario:**Time: 8:15 am Date: 8/12/2013**

Saturday morning I realized my sink had sprung a leak. I opened the cabinet underneath the sink and quickly realized it was too dark to work on it under there. After ten minutes of searching through a dark drawer I was able to locate my flashlight. If it had some kind of small red indicator light on the side I could have located it faster. The color red is most commonly used when trying to locate something during an emergency. A few examples are exit signs, fire extinguishers lights, ambulance lights, etc. Red is also used to indicate that something is powered off. This could be a dim light that lights up when the flashlight is turned off. After finding the flashlight I realized that the batteries were dead so I had to replace them. It was very hard to get a grip on it to twist the top off. I replaced the batteries and then I climbed underneath the cabinet. I attempted to stand the flashlight up and aim it towards the pipes. It fell over and cracked the lens a little bit. I probably should have bought a more durable one to begin with. I couldn't get it to stand so I tried to hold it. Holding the flashlight and a wrench was too difficult. Not just that, but the flashlight's heavy weight also made it difficult to use with my arthritic hands. I only have it because it was given to me by a family member. I'm thinking about getting one that

is better for me. I was finally able to find some books to prop up the flashlight. On top of all that, the flashlight barely produced enough light. It took me longer than it should have but I was finally able to fix my sink.

Research:

Interview:

Common household chores (when flashlight is used):

- Working under the sink
- Working in the basement
- Working in the garage

Women's Salaries:

- Average Women salaries for job postings nationwide are 6% lower than average salaries for all job postings nationwide.
- Average salary in USD as of Oct 24, 2013: \$58,000

Male-Female Compared Incomes:

- In 2010 the median income of FTWR workers was \$42,800 for men, compared to \$34,700 for women. The female-to-male earnings ratio was 0.81,

Arthritis statistics:

- Two-thirds of the people that have doctor-diagnosed arthritis are under the age of 65

Men & Women Statistics:

- 158.3 million was the number of females in the United States in 2011. The number of males was 153.3 million.

Forum (A few people who made suggestions were middle aged and talked about flashlight use with their arthritis):

- "If your mom's arthritis makes it difficult for her to open jar lids and medicine bottles, avoid flashlights which are activated by twisting the head or tail. Opt for a light with a pushbutton or slide switch instead." Said user, Parnass.

Hand Impairments (Arthritis):

- Simple grips and big slider switch makes this another low physical effort design, good for people with upper body impairments.
- Due to upper body or hand impairments, a person can have a hard time holding onto a flashlight or operating one.
- People with such impairments should first look for moderate diameter on a flashlight. Too small or too large can be difficult to grasp and carry.
- Another design feature they should look for is large rubber grip that goes around the flashlight which prevents the flashlight from slipping out of the person's hand or from the surface they put it on.
- When it comes to the on/off switch, they should look for switches that require low physical effort.
- The flashlight should be easily disassembled to get to the battery compartment. If it's under a twist on/off cap, it should be easy-to-grasp cap.
- Weight of the product can also be an issue when carrying it, so user should also pay attention to how much the flashlight might weigh when choosing one.

Forum (Everyday flashlight uses):

- "Mostly to assist my aging vision. Ex: looking for things in the car, under the desk, in dark cabinets etc (where I use to be able to see, but where now a bit more light is needed). Yesterday's use included looking under a desk for wire connections on the back of my computer/speakers. Slipping into the bedroom after lights out (so as not to disturb my wife), looking under the hood in the carport." Said user, DoctaDink.

Hand and Wrist Arthritis:

- As part of this condition, the synovium proliferates, causing local destruction of bones, joints, and soft tissues. Commonly, the disease begins in peripheral joints (hands and feet) and is often symmetrical, eventually involving multiple joints.

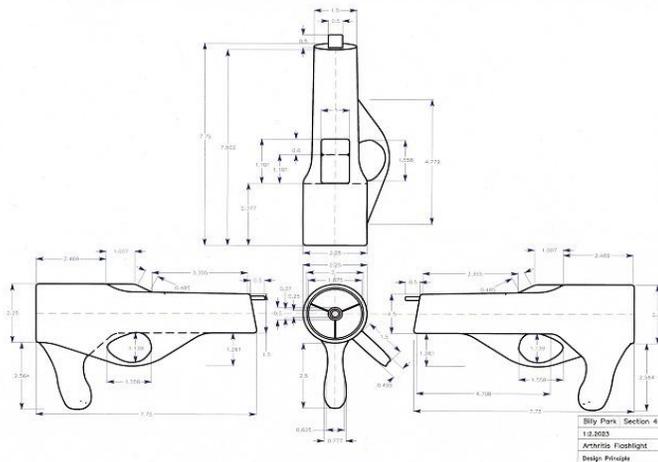
Forum (What kind of people enjoy using flashlights, use them regularly, and care about their quality. (Quite a few are middle aged)):

- “48 male. Professional accountant.” Said user, Launch mini.
- “Middle aged lady and mother of a 24 y/o son.” Said user, Sassaquin.
- “I started getting into lights about 10 years back (I'm 45 now). I work in a bar/bowling alley.” Said user, Drillbit.
- “Mid-50's, self-employed (teaching stuff).” Said user, Gmcgmc.
- “Me, mid 40's and it is simply a lighting tool. I find them interesting as machine art and technology.” Said user, RA40.
- “I'm 49 and do financial planning” Said user, Crankitup.

Forum (Middle aged man's view on the “home” flashlight.):

- “40 years later as a middle aged homeowner I have begun to consider what a modern incarnation of the "house light" might be. I have a healthy collection (no surprise!) of AA and CR123 based EDC type lights as well as some well worn 3 D-Cell Maglites. None really qualify, however, as a 'house light'.” Said user, Andrewnewman.
- “The modern house light by my formulation should produce a wall of floody light but also be able to run for extended periods of time should the power go out. The light should be rugged, waterproof and reliable and run on easily found batteries (those giant 6V batteries with the screw terminals were available at every hardware store in Maine in the late 1960's and early 1970's). Finally a modern house light should have some form of beacon of flashing light for emergencies.” Said user, Andrewnewman.

Billy Park's arthritis flashlight design (competitor):



Eugene Choi's arthritis flashlight design (competitor):



This page is sorted by top selling hands free flashlights (competitor):

- When looking through the section “Headlamps and Hands-free flashlights” I did not see a single flashlight similar to mine.
- There were a few flashlights that stood on their own like these:



- Flashlight C was the best selling out of these three.

This page can be sorted by bestselling or highest rated (competitor):

- One of the top selling flashlights has a red light on the bottom so it can be found in the dark or during an emergency.



- Found a flashlight that is a flashlight and lantern combination.



Resources:

Interview:

Baumann, Lawra. Meeting Interview. 10 Sep. 2013.

Women's Salaries:

"Women Salary." *Indeed.com*. N.p., 2013. Web. 18 Sep. 2013. <<http://www.indeed.com/salary/q-Women-I-Need,-Inc.html>>.

Male-Female Compared Incomes:

N.a. "Male-Female income disparity in the United States." *Wikipedia.org*. Wikipedia, 30 Aug. 2013. Web. 29 Sep. 2013. <http://en.wikipedia.org/wiki/Male%E2%80%93female_income_disparity_in_the_United_States>.

Arthritis statistics:

"Arthritis Prevalence: A Nation in Pain." *Arthritis.org*. Arthritis Foundation, 2008. Web. 18 Sep. 2013. <http://www.arthritis.org/files/images/newsroom/media-kits/Arthritis_Prevalence.pdf>.

Men & Women Statistics:

U.S. Census Bureau. "Women by the Numbers." *Infoplease.com*. Pearson Education, 2007. Web. 18 Sep. 2013. <<http://www.infoplease.com/spot/womencensus1.html>>.

Forum (A few people who made suggestions were middle aged and talked about flashlight use with their arthritis):

Wattzup. "Flashlight suggestions for elderly with arthritis." *Candlepowerforums.com*. vBulletin Solluctions, 22 Mar. 2011. Web. 18 Sep. 2013. <<http://www.candlepowerforums.com/vb/showthread.php?311655-flashlight-suggestions-for-elderly-person-with-arthritis>>.

Female Photo:

George, Rebekah. "From bulky..." 2011. Photograph. Prevention Healthy living group, Emmaus.

Male Photo:

N.a. "Herbal Supplements For Men Over 40." *Healthyyounaturally.com*. Healthy You Naturally Wellness Centres, N.d. Web. 29 Sep. 2013. <http://www.healthyyounaturally.com/herbal-supplements/mens_health.htm>.

Hand Impairments (Arthritis):

Saatcioglu, Cana. "Flash Light Features and AT for people with upper body/hand or cognitive impairments." *atwiki.assistivetech.net*. National Public Website on Assistive Technology, 4 Dec. 2009. Web. 29 Sep. 2013.

<http://atwiki.assistivetech.net/index.php/Flash_Light_Features_and_AT_for_people_with_upper_body/hand_or_cognitive_impairments>.

Forum (Everyday flashlight uses men and women):

SmurfTacular. "What do you mostly use your flashlight for?" *Candlepowerforums.com*. vBulletin Solutions, 3 Mar. 2010. Web. 29 Sep. 2013.

<<http://www.candlepowerforums.com/vb/showthread.php?264096-What-do-you-mostly-use-your-flashlight-for>>.

Hand and Wrist Arthritis:

N.a. "Arthritis of the Hand and Wrist." *Clevelandclinic.org*. Cleveland Clinic, N.d. Web. 29 Sep. 2013. <<http://www.clevelandclinic.org/health/health-info/docs/1700/1706.asp>>.

Forum (What kind of people enjoy using flashlights, use them regularly, and care about their quality. (Quite a few are middle aged)):

Cheeman150. "What kind of people are into flashlights?" *Candlepowerforums.com*. vBulletin Solutions, 1 Oct. 2011. Web. 29 Sep. 2013.

<<http://www.candlepowerforums.com/vb/showthread.php?323457-What-kind-of-people-are-into-flashlights>>.

Forum (Middle aged man's view on the "home" flashlight.):

Andrewnewman. "The 'House' Flashlight." *Candlepowerforums.com*. vBulletin Solutions, 25 Jul. 2010. Web. 29 Sep. 2013. <<http://www.candlepowerforums.com/vb/showthread.php?284769-The-quot-House-quot-Flashlight>>.

Billy Park's arthritis flashlight design (competitor):

Park, Billy. "Flashlight for Arthritis." *Cargocollective.com*. N.p., N.d. Web. 1 Oct. 2013.

<<http://cargocollective.com/bpark/Flashlight-for-Arthritis>>.

Eugene Choi's arthritis flashlight design (competitor):

Choi, Eugene. "Flashlight for Arthritis Patient." *Cargocollective.com*. N.p., Apr. 2008. Web. 1 Oct. 2013. <<http://cargocollective.com/eugenechoi/Flashlight-for-Arthritis-Patient>>.

This page is sorted by top selling hands free flashlights (competitor):

N.a. "By application: Headlamps and Hands-Free Flashlights." *Action-lights.com*. MEI Research Corporation, N.d. Web. 14 Oct. 2013. <<http://www.action-lights.com/grp-department-30/shop-department.aspx?prodgrpido=30>>.

This page can be sorted by bestselling or highest rated (competitor):

N.a. "Sports & Outdoors: Lights & Lanterns." *Walmart.com*. Wal-Mart Stores, N.d. Web. 14 Oct. 2013. <http://www.walmart.com/browse/camping/lightslanterns/4125_4128_645883/?_refineresult=true&ic=32_0&ss=false&tab_value=all&search_sort=5&mm=>>.