

Using Stories to Encourage Hope and Connection in Sexual Assault Survivors

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Introduction

Every two minutes, someone in the United States is sexually assaulted. That means that 1 in every 3 women and 1 in every 33 men are sexually assaulted within their lifetime. Survivors of sexual assault are 3 times more likely to suffer from depression, 6 times more likely to develop Post Traumatic Stress Disorder, 26 times more likely to abuse drugs and 4 times more likely to contemplate suicide. Sexual assault is an issue that drastically affects millions of Americans, yet is rarely talked about. Survivors of sexual assault are often left feeling hopeless, depressed, numb and many other intense emotions. (RAINN, 2009)

Background: Purpose

There are many aspects of sexual assault, but the goal of this project is to encourage hope and meaning in survivors of sexual assault.

Hopefulness minimizes the individual's perception of the severity of their current adversity and grants them a sense of the possibility of overcoming their challenges. Higher levels of hope strengthen an individual's determination to achieve their goal. Those with more hope are more likely to do better in healing programs, such as drug rehabilitation (Kortte, Stevenson, Hosey, Castillo, Wegener, 2012). When facing a tremendous adversity, such as sexual assault, having hope can make a huge difference on healing. Holding the belief that it is possible to feel better will give a survivor the strength necessary to go through the painful healing process.

Frankl's theory says that when desired, meaning can be found in the most desolate situations where suffering is inevitable. The one thing that cannot be taken away is the freedom to choose your attitude (Frankl, 1959). For survivors who are ready, sharing their story can provide meaning. Erikson's notion of generativity refers to the feeling of leaving your mark on

the world as a better place. Sharing their story on a site that provides hope to others currently struggling gives survivors meaning and a sense of purpose for this difficult event (Erikson, 2000).

As an added benefit, those who are seeking a greater understanding of the topic can be exposed to these stories. Empathy is a multidimensional emotion, so using the correct perspective is vital. There is a significant difference between the perspectives taken in, “How would I feel if I was in this situation?” and “How does this person feel in this situation?” In the first perspective, the individual experiences both empathy and personal discomfort. The personal discomfort outweighs the empathy. Any action taken is motivated out of self-interest to minimize their discomfort. This type of empathy results in little or no social action. Psychologists have theorized that this occurs when motivation is discomfort because the easiest way to minimize these unpleasant emotions is to ignore the situation that initially caused it. However, no research has yet proven this thought yet. In the second perspective, the individual experiences only empathy. An altruistic motivation emerges for social action. Since this project focuses on an individual’s personal story, not putting the audience in the storyteller’s shoes, a reader without any history of sexual assault can imagine what this person was experiencing. In addition, transportation or the level in which the individual is immersed into the story effects the resulting empathy (Johnson, 2012). Transportation can be measured by Green and Brock’s (2000) transportation scale. According to this scale, an individual is engaged in a story by vivid imagery, realistic characters, authentic plot and emotional impact. The more absorbed an individual is in a story, the more affective empathy experienced and the more the audience learns socially about a different world. Presenting an authentic story not only means that the audience will be more likely to be immersed, but that they will walk away with accurate social knowledge.

Background: Borrowing from successful models

Psychotherapy is what we traditionally mean when someone sees a psychologist or therapist. Crisis counseling, generally given over a 24 hour hotline, is when trained volunteers help a survivor through a period of extreme emotional distress that is insurmountable by their current coping mechanisms through normalization/validation, support, and accurate information. While this project is not intended to replace or provide an alternative for therapy or crisis counseling, there are aspects that are practiced successfully in therapy or peer counseling that can be applied to this project. Psychotherapy and crisis counseling can illuminate ways that we can encourage hope.

Psychotherapy can foster hope through perspective change, which redefines the problem in the individual's mind. Therapy uses specific techniques of reframing, metaphors, sharing personal stories and humor to help the client view their adversity differently. Most importantly, hearing relatable personal stories provides the possibility of new paths for clients' currently troubling life narrative (Larsen and Stege). Thinking about positive, yet possible, alternative paths can provide much hope. Inevitably, every survivor is going to have a slightly different perspective. Due to the nature of the sexual assault the stories presented by our search engine will have similarities to their own, making the story they read relatable. By hearing about and relating to someone else's story, they are learning about the way someone else views a similar situation in a meaningful way. The differences between their own view and the one presented in the story can help a survivor reframe their problems and give them hope. In addition, having a large database of stories allows for varied content, including those with humor and metaphors.

Humor provides hope by putting a lighter spin on an emotionally intense subject. Metaphors allow someone to better understand an otherwise overwhelming subject, removing some of the hopelessness of the adversity. (Larsen and Stege, 2010) The best predictor of the success of a healing program is whether or not individuals were encouraged and empowered to improve their own situations, which indirectly implies that the individuals walked away with more hope about their pathway of healing. (Tally, 1992)

Crisis intervention, something that anyone with a passion can volunteer to do, has an elaborate training in order to best help counselors empower survivors. All rape crisis counselors in California are required to be certified by the state, which involves forty hours of training and at least 8 hours of continued education a year. The California Coalition against Sexual Assault's training manual for sexual assault crisis counselors was written by 33 individuals with both significant work experience and education in the field. Further research was conducted from input by people at 25 different rape crisis centers across the state. The manual was then reviewed by 8 experts in the field. Clearly, this guide is widely accepted as accurate. A primary technique in crisis counseling is validating the survivor's emotions and normalizing their reaction. This is further emphasized by the focus of the training manual. A significant amount of the training (about half the guide) was dedicated to showing counselors that, due to its traumatic nature, any reaction to sexual assault is normal. The remaining half was split between specific crisis counseling techniques and legal/medical information. Based on the information in this guide, it is clear that a large part of crisis counseling centers around normalizing a survivor's reactions. This project serves to normalize a survivor's reaction by presenting selected relatable stories.

Deliverable: Project Story

Project Story is a website created to encourage hope and meaning to survivors of sexual assault. Survivors can enter in a little information about themselves and their story. The site will return relatable stories of other people who have gone through something similar. Survivors can also contribute their own story. By connecting survivors to other relatable stories, users can walk away with a little more hope and a little less isolation.

Design and Implementation

Our website can be found at projectstories.org. In order to focus on the overall purpose and human computer interaction, we are using Wordpress, a content management system that will simplify the site building process.

The website's search function will find compatible stories based on a survivor's unique emotions. In order to implement the search function, I am tagging each story with keywords. The function will also search through the text of each story. Survivors can feel similar emotions, but describe them in different ways. However, if the survivor did not use the exact phrasing of the tags, they would not get all the results. To improve this functionality, I am using a thesaurus API, found at <http://words.bighugelabs.com/api.php>. When a survivor enters in an emotion, I will run that word through the thesaurus. The thesaurus returns all possible synonyms, similar words and antonyms. I sort through to find all the adjectives (since emotions are typically described as adjectives) synonyms and similar words. However, even after sorting out just adjectives, the list of words is often too lengthy. The list often contains words that are obscure or have not been relevant in the past 100 years. I am using Wordnik's API (<http://developer.wordnik.com>) to filter for more relevant words.

If survivors submitting the story feel it is relevant to their recovery and, most importantly, feels safe they can choose to disclose more about themselves. For example, a survivor's ethnicity, sexual orientation, gender, developmental or acquired disabilities, religion and first language may influence their reaction and recovery from assault. For example, every LGBT person sexually assaulted is not going to react in the same way. However, identifying as gay could have a unique impact. It is important to acknowledge that assault affects everyone differently. Each story is tagged with any disclosed demographic information, allowing our website to show more relatable stories.

The project searches using categories. Each story, when uploaded, is put into a category based on the actual event. The categories are childhood sexual abuse, stranger rape, acquaintance/date rape and intimate partner violence. These categories are weighted in the search function. Stories from a similar category are more likely to be shown. However, stories from another category can still be shown if the emotions matched are similar.

Other features of the website involve a browse and a submit page. Under the "Browse" page, you can view a list of random stories. On the "Submit" page, users can contribute their own stories. The stories are sent to a moderator, who adds more tags and uploads the story.

Analysis

This project will be evaluated by users of Pandora's Aquarium, who contributed most of the stories for this site. Since Project Story's primary audience is sexual assault survivors, testing was completed using voluntary and anonymous survivors. We went back to the same people who had initially offered stories and asked if they'd like to help us improve the site.

I used Jotform to create the test and to collect the responses. There are two versions of the test, identical except for the order that the stories were read. In the first version of the test, we had users read a story on the Browse page, then the Find page. In the second version, the order was reversed, asking users to read a story from the Find page, then from the Browse page. On the site, I created a user account to give them access to all stories and updated search functionality.

When a sexual assault survivor volunteered, I emailed them a link to our form and the user account information. To begin the test, I asked for their overall mood to get a baseline. Then, users would navigate to either the browse or find page, based on their test version. Afterwards, they rated their overall mood, feelings of isolation and feelings of hope and described how they were feeling. Users would then read a story from the other section of the website and answer the same questions. The use of the Browse page is to gauge the effectiveness of the stories themselves. The use of the Find page is to test the effectiveness of the story selection process. Swapping the order of the two sections for half the participants eliminates the variable of the number of stories read at the time of answering comparable questions. Finally, we asked them to compare their reaction to a random story from the Browse page and from the search results. Appendix B has the exact test used.

Change in Rating	Average
Overall Mood after a Random Story	+1.16
Overall Mood after a Selected Story (compared to no story)	+2.18
Overall Mood after Finding a Story (compared to a random story)	+1.34
Connection after a Selected Story	+1.93
Hope after a Selected Story	+1.44

Table A

The test results show that reading stories, even random stories, have a positive impact on an individual's overall mood. When the stories are selected using Project Story's algorithm, the positive impact is doubled. In addition, users report higher levels of connection and hope after reading a selected story as opposed to a random story. Consistently, reading two stories produced

a higher level of hope, connection and overall mood. For example, a user who completed the test and read both a Browse and Find story would reliably have higher results than a user who had only read either the Find or Browse story. The numerical data used to calculate the numbers for Table A can be found in Appendix C.

Related Work

I was unable to find work that is similar in every aspect to this project. However, there are many projects that are significantly related in certain aspects.

At Vassar college, to help survivors, students created a safe place to share personal stories about sexual abuse in order to break the silence surrounding these issues. They believed that too often, these stories are stigmatized and, as a society, we turn a blind eye. Students at Vassar started a blog where individuals can anonymously share their story of sexual abuse, thus creating a safe online community for survivors. The site also contains a list of local resources and a place to share reactions or reflections to reading the stories. This blog can be found at <http://breakthesilenceatvassar.com>. Cal Poly Safer recently started their version of this, which can be found at <http://breakthesilenceatcalpoly.com>. Both my project and break the silence use personal stories of sexual assault and rape.

Break the silence describes themselves as an online community and are focused more on the sharing of stories to create a safe place to talk about these issues. My project attempts to encourage hope within the survivor by providing relatable stories. While I also rely on the contribution of stories, my emphasis is on the connection with a selected story.

Conclusion

Sexual assault is a tragic event that affects far too many people in each of our lives. The devastation it leaves creates a need for hope and connection for survivors and supporters. Project Story is a website geared to increased hope and connection in sexual assault survivors. The first users or testers of the project found that it was helpful for them, giving them hope and an improved mood. This means that future work in expanding the scope of the project is promising. The biggest obstacle to this project is still gathering more stories. A large repository will be needed to create the full user experience I initially designed. Currently there are no similar projects publicly available, allowing this project to create a foundation in this niche.

Future Work

With more time, I would devise a better moderation system. Currently, when people submit their own stories, these stories must be read over and tagged to prevent harmful submissions and to ensure that all stories can be appropriately found. For example, if a story was tagged as, “numb”, but was instead indicative of, “anger”, someone who is numb would receive an unhelpful result. Someone who is angry would miss out on the chance to see this story. This works for the scope of senior project since we are still under development and is the safest option for people using the site. However, the website could expand more independently if there was a moderation system that did not rely on a single person reading the submissions. With more complex search algorithms, we may not be so reliant on tagging stories accurately.

I would also include more information in the search results. There would be historical figures, significant contributors to our society and even celebrities who had been through something similar. There is a lot of hope for a survivor in seeing someone who our society

views as successful go through something like they did. With issues of sexual assault, something that we traditionally keep as far from public eye as possible, this information proved elusive. I would increase the local and national resources provided. I would include references to literature, movies and TV shows that are similar to their story.

With another year, I would also expand the topics of this site. I would be interested in expanding to include child abuse. If I could work on this project for the next decade or two, I would love to be able expand to every issue imaginable. Anyone who is experiencing any sort of difficult situation or emotional distress could come to this site and enter in some information about themselves and their story. Anyone with a story to share could contribute to this project.

References

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Appendix A – Algorithm Source Code

```
<?php
/*
Template Name: Thinking
*/
?>

<?php
get_header();
?>

<div id="primary" class="site-content">
  <div id="content" role="main">

      <?php

//Would you like the print outs?
$debug=False;
if($debug){
  echo "Debug Mode On! Disable in Thinking... Page Template :] <br/>";
}
require('wordnik/wordnik/Swagger.php');
$myAPIKey = '2350b5d6d5cc08f8c4e431d02580671fceb7f860c91adae6';
$client = new APIClient($myAPIKey, 'http://api.wordnik.com/v4');
$wordApi = new WordApi($client);

//Check whether the form has been submitted
if (array_key_exists('check_submit', $_POST)) {

  if ($debug){
    echo "Test1: {$_POST['emotion']}<br />";
    echo "Test2: {$_POST['category']}<br />";
    echo "Test3: {$_POST['emotion2']}<br />";
    echo "Test4: {$_POST['moreinfo']}<br /><br />";
  }

  //Process demographic info
  $moreinfo=$_POST['moreinfo'];
  $moreinfo=relevanssi_remove_punct($moreinfo);
  $moreinfoArr=explode(" ", $moreinfo);
  $moreinfoString="";

  for($m=0; $m<count($moreinfoArr);$m++){
    $moreinfoString=$moreinfoString."+ ".$moreinfoArr[$m];
  }

  //Process Emotions
  $process1NeedRun=True;
  $process2NeedRun=True;
  $search="";

  while($process1NeedRun||$process2NeedRun){

  if($process1NeedRun){
```

```

    $var=$_POST['emotion'];
    $process1NeedRun=False;
    }
    else{
    $var=$_POST['emotion2'];
    $process2NeedRun=False;
    }

//Getting the file name in a string
$var=relevanssi_remove_punct($var);
$keywords=explode(" ", $var);

$needFirstSyn=True;
$needFirstSim=True;
$needFirstWord=True;
$syn="";
$sim="";
$initialWords="";

for($i=0; $i<count($keywords);$i++){

    if($needFirstWord){
        $initialWords=$keywords[$i];
        $needFirstWord=False;
    }
    else{
        $initialWords=$initialWords." ".$keywords[$i];
    }

    $filename="http://words.bighugelabs.com/api/2/386e6fdbdb97410f90d8502ff110817d/".$keywords[$i]."/p
hp";

    //Using the URL, getting a PHP serialized array. Unserializing the array
    $fileString= file_get_contents($filename);
    $word=unserialize($fileString);

    if($debug){
        var_dump($keywords);
        echo "<br/>Initial Words: ".$initialWords;
        echo "<br/>All Syn for: ".$keywords[$i]."<br/>";
        var_dump($word["adjective"]["syn"]);
        echo "<br/>All Sim for: ".$keywords[$i]."<br/>";
        var_dump($word["adjective"]["sim"]);
    }

    for($j=0; $j<count($word["adjective"]["syn"]);$j++){
        $releSyn=$wordApi->getWordFrequency($word["adjective"]["syn"][$j],True,2000,2012)->totalCount;

        if($releSyn>5){
            if($needFirstSyn){
                $syn=$word["adjective"]["syn"][$j];
                $needFirstSyn=False;
            }
            else {
                $syn=$syn . "+" . $word["adjective"]["syn"][$j];
            }
        }
    }
}

```

```

    }
  }
}

for($k=0; $k<count($word["adjective"]["sim"]);$k++){
  $releSim=$wordApi->getWordFrequency($word["adjective"]["sim"][$k],True,2000,2012)->totalCount;

  if($releSim>5){
    if($needFirstSim){
      $sim=$word["adjective"]["sim"][$k];
      $needFirstSim=False;
    }
    else {
      $sim=$sim . "+" . $word["adjective"]["sim"][$k];
    }
  }
}
if ($debug){
  echo "<br/>After for loop of Syn for : ".$syn."<br/>";
  echo "<br/>All Sim for : ".$sim."<br/>";
  echo "search: ".$search;
}

} //end large for

$search=$search. "+" . $initialWords. "+" . $syn. "+" . $sim. "+" . $moreinfoString;
if($debug){
  echo "Sim: ".$sim;
  echo "<br/>Syn: ".$syn;

  echo "<br/>Searching for ".$search."<br/>";
}
} //end while

if($debug){
}
else{
  echo '<script type="text/javascript">
        <!--
                window.location = "http://projectstories.org/?s='.$search.'"
        //-->
    </script>';
}
}
else {
  echo "You can't see this page without submitting the form.";
}
?>

</div><!-- #content -->
</div><!-- #primary -->

<?php get_sidebar(); ?>
<?php get_footer(); ?>

```

Appendix B – Test

Project Stories

Thank you for taking the time to help us improve our website to better help survivors. If you feel triggered, please stop immediately. Your well-being is far more important than an additional test result.

Please rate your overall mood

1 2 3 4 5 6 7 8 9 10
Worst Best

Project Stories

Thank you for taking the time to help us improve our website to better help survivors. If you feel triggered, please stop immediately. Your well-being is far more important than an additional test result.

Please read a story on the "Browse" tab of the website

How are you feeling?

Please rate your overall mood

1 2 3 4 5 6 7 8 9 10
Worst Best

Which of these best describes how you are feeling?

1 2 3 4 5 6 7 8 9 10
Isolated Connected

Which of these best describes how you are feeling?

1 2 3 4 5 6 7 8 9 10
Hopeless Hopeful

Project Stories

Thank you for taking the time to help us improve our website to better help survivors. If you feel triggered, please stop immediately. Your well-being is far more important than an additional test result.

Using the "Find" page, please search for and read a story

Is it a different story? Yes
 No

How are you feeling?

Please rate your overall mood

1 2 3 4 5 6 7 8 9 10
Worst Best

Which of these best describes how you are feeling?

1 2 3 4 5 6 7 8 9 10
Isolated Connected

Which of these best describes how you are feeling?

1 2 3 4 5 6 7 8 9 10
Hopeless Hopeful

Project Stories

Thank you for taking the time to help us improve our website to better help survivors. If you feel triggered, please stop immediately. Your well-being is far more important than an additional test result.

How did your reactions to the two stories compare?

Anything else you'd like to share?

Submit

Appendix C – Numerical Data

Version	Baseline	Browse			Find		
	Overall Mood	Overall Mood	Connection	Hope	Overall Mood	Connection	Hope
A	4	3	2	4	7	5	6
A	2	3	3	1	6	6	7
A	1	4	1	3	6	7	6
A	2	3	2	4	7	6	7
A	3	5	4	6	6	5	8
A	2	3	3	3	7	6	7
A	1	4	2	5	4	5	6
A	3	5	2	5	8	4	4
A	4	6	3	2	6	6	5
A	1	1	1	1	7	7	6
A	2	1	1	1	6	8	7
A	3	4	1	4	9	4	6
A	3	3	3	2	6	6	5
A	2	4	3	3	6	5	6
A	3	4	2	4	7	5	7
A	1	2	2	5	6	3	8
A	3	5	3	2	5	5	7
A	2	3	4	5	5	7	5
	2.33333333	3.5	2.333333	3.333	6.33333333	5.55555556	6.27777778
B	1	6	5	7	4	8	6
B	4	7	5	5	7	9	7
B	2	6	9	6	6	8	6
B	3	7	5	9	8	6	5
B	2	4	7	6	5	4	4
B	4	6	9	6	8	4	5
B	3	9	6	9	9	5	6
B	2	7	4	8	7	6	7
B	3	6	8	8	5	7	6
B	4	7	8	8	5	8	7
B	5	5	8	5	6	7	6
B	4	8	7	7	9	5	7
B	3	6	6	6	6	3	6
B	4	5	6	4	6	4	7
B	3	6	7	5	7	5	6
B	2	8	5	5	7	7	7
	2.66666667	4.84285714	4.266667	4.781	6.43809524	5.75873016	6.20793651

