THE GARMENT INDUSTRY IN BANGLADESH: AFTERMATH OF FACTORY DISASTERS

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Outline

I. Occupational Health
II. Garment Industry of Bangladesh
III. Baseline Survey by Alliance
IV. Interventions by Alliance
V. Rana Plaza Survivors Study
VI. Employment for People with Disability
I. Occupational Health

II. Garment Industry of Bangladesh

III. Baseline Survey by Alliance

IV. Interventions by Alliance

V. Rana Plaza Survivors Study

VI. Employment for people with disability
ILO principle: workers should be protected from sickness, disease and injury arising from their employment.

- 2 million die/year from work-related injuries/diseases
- 160 million/year suffer from work-related diseases
- 270 million/year sustain fatal and non-fatal work-related injuries

4% of world's GDP lost as consequence of occupational diseases/injuries

Employers face costly early retirements, loss of skill, absenteeism, high insurance premiums.....

Many are avoidable through implementation of prevention, reporting and inspection
WHO Healthy Workplace Model

A healthy workplace is “one in which workers and managers collaborate to use a continual improvement process to protect and promote health, safety and wellbeing of workers”
Occupational Health aims at

Promotion and maintenance of the highest degree of physical, mental and social well-being of workers

"The adaptation of work to man and of each man to his job”
Globalization of Textile, Clothing & Footwear

Sizeable employment losses in Europe/North America and gains in Asia/developing world

A shift from formal to informal sector with generally negative consequences on wage levels/conditions of work.

From 1970 to 1990, TCF workers Increased
597% in Malaysia; 416 % in Bangladesh; 385 % in Sri Lanka; 334 % in Indonesia; 271 % in Philippines; and 137% in Korea

Decreased
- Germany-58%; UK– 55%; France – 49%; and US- 31%

60% world clothing exports are made in developing countries. Asia-32%. China-13%

- First wave: Korea, Singapore, Hong Kong, Taiwan
- Second wave: Philippines, Indonesia, Thailand, Malaysia
- Third wave: Bangladesh, Pakistan, Sri Lanka, Laos, Nepal, Viet Nam

US still employs 1.6 million workers, down from 2.5 million in 1980.

ILO report, 1996
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Garment Industry

RMG started in late 1970s. Experienced a real impetus between 1980s-1990s

Started exporting in 1976

Critical to national economy as a primary source of employment and foreign currency

Expected to grow rapidly as China has started to divest
HOW MUCH DOES IT COST TO MAKE A DENIM SHIRT IN BANGLADESH, VERSUS THE U.S.?

U.S.

$0.75  INDUSTRIAL LAUNDRY

$5  MATERIALS

$7.47  LABOR COSTS

TOTAL $13.22

BANGLADESH

INDUSTRIAL LAUNDRY $0.20

MATERIALS $3.30

LABOR COSTS $0.22

TOTAL $3.72

SOURCE: Institute for Global Labour and Human Rights
Future Growth of RMG

Bangladesh's apparel exports will double by 2015; triple in 10 years.

Future growth will require an additional 3.5 million workers by 2020.

Emphasized on ethical labour standards as a key prerequisite to realize the full potential.
Why Bangladesh?

Low production costs

- Abundant labor; lack of alternate job opportunities
- Minimal/no health & safety/environmental regulations
- Very low wages, benefits/facilities

Capacity, Expertise, Experience

Tax favor; Government encouragement; Quota

Unions/organized labor nonexistent

Entrepreneurship—simple technology, small capital requirement
Worker Profile

Young women (17-35 years)

Lack of skills/education (alternate: construction work/agricultural work / housemaids)

Migrate for these jobs to capital city

Live in slums/poor housing

Poor health, nutrition deficiency

Spend most on food/housing; save for marriage and dependents
Workplace profile

- Shift work
- Long shifts
- Overtime
- Casual work
- Pay/piece

- Maternity leave
- Sick leave
- Vacation
- Transportation
- Lunch/breaks

- Daycare/ Nursing room
- Clean drinking water
- Toilets/Canteen
- Air quality, violence/abuse, noise, ergonomics……..
Socio-economic change

- Self-esteem/Identity
- Economic freedom/independence
- Decision making in family/society
- Delaying marriage/better education
- Elevating SES of self and family
- Better marriage/Lower Fertility
- Parental interest in female education
Chronology of Disaster

April 11, 2005
- Spectrum Factory collapse
  - 64 deaths

November 30, 2006
- Chowdhury Factory Fire
  - 51 deaths

November 24, 2012
- Tajreen Factory fire
  - 112 deaths

January 26, 2013
- Smart Fashion Factory fire
  - 7 deaths

April 24, 2013
- Rana Plaza Factory collapse
  - 1,127 deaths

Images: Newspapers
Triangle Waist-Shirt factory fire
New York, 1911

New York’s Asch building fire where the Triangle Waistshirt factory was located

Victims of the Triangle waist shirt factory fire are lined up for inspection

en.wikipedia.org/wiki/Triangle_Shirtwaist_Factory_fire
Working conditions: What we know

Previous research
- Musculoskeletal symptoms & disorders
- Respiratory symptoms lung functions

Possible health hazards/outcome
- Poor ergonomics; Prolonged squatting
- Exposure to chemicals and toxins
- Loud noise
- Inadequate light
- Fiber dust exposure
- Chest discomfort, headaches, weight loss, fatigue, vision and ear complaints, body pain, and dyspnea
- Stomach ache, swelling in fingers, heartburn, hoarseness of voice
Lack of Evidence

Few studies on garment workers in developing countries

- Descriptive, case reports, case series, cross sectional designs
- Limits ability to identify risk factors/hazards correlated with health outcomes
- Small sample size, ad-hoc or pilot scale data collection

Evidence needed to determine preventive measures

Great need for Large scale epi study for identification and systematic data collection of workplace factors, socio-demographics of workers, health outcome
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Alliance is formed by 26 large Western retailers
Baseline Assessment

Alliance conducted a baseline study one year ago
• Gain a good understanding of workers’ perspective, knowledge and awareness
• A set of baseline health/safety indicators to measure impact over time

Method:
• Worker survey and focus group discussion
১. আগুনের ধরণে কোন তিনটি জিনিসের দরকার? (যে কোন তিনটি করে নিন)

- পানি
- আগুনের উৎস (ঝুলন্ত, বিদ্যুৎ, পানি কেন বিদ্যুৎ)
- কর্মচারী ডাই অগ্নিকাট
- তৈল
- অগ্নিকাট

২. যদি দেখেন ফায়ার এলাকায় কিছু কোন আগুনের চিহ্ন দেখেন, তাহলে আপনি কি করবেন?

- অপেক্ষা করবেন এবং দেখেছেন কর্মচারীর সঙ্গে কথা বলুন, যদি ফায়ার এলাকা রক্ষা করা প্রয়োজন
- ফায়ার হিল্টে ফোন দিয়ে মিডিকেল সেবাস চালু করুন
- সত্যিকার নিন্দা লাগানো যা করলে তাই করুন
- নিরাপত্তা কর্মকে রিসক কারণকে রিসক করবেন না.
Focus Group

- 10 FGD off-site with the support of a NGO
- Held in 3 different Child Care Center Facilities.
  - Participants remunerated and joined voluntarily.
  - Each FGD included 10 – 12 participants: male and female
  - Took approx. 1 hour

In form of discussions and games, workers asked to recount experience regarding fire incidence, fire safety training and share opinion on importance of fire safety measure/evacuation.

Important to hear stories behind the data and give workers chance to express thoughts and concerns freely.

<table>
<thead>
<tr>
<th>Location</th>
<th>Participating Workers</th>
<th>Number factories represented by workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Savar</td>
<td>20</td>
<td>6</td>
</tr>
<tr>
<td>Gazipur</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>Mirpur</td>
<td>41</td>
<td>22</td>
</tr>
<tr>
<td>Factory No.</td>
<td>No. of Workers</td>
<td>Survey Sample (No.)</td>
</tr>
<tr>
<td>------------</td>
<td>----------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>1</td>
<td>42</td>
<td>21</td>
</tr>
<tr>
<td>2</td>
<td>47</td>
<td>22</td>
</tr>
<tr>
<td>3</td>
<td>50</td>
<td>38</td>
</tr>
<tr>
<td>4</td>
<td>73</td>
<td>43</td>
</tr>
<tr>
<td>5</td>
<td>194</td>
<td>108</td>
</tr>
<tr>
<td>6</td>
<td>306</td>
<td>104</td>
</tr>
<tr>
<td>7</td>
<td>361</td>
<td>106</td>
</tr>
<tr>
<td>8</td>
<td>366</td>
<td>112</td>
</tr>
<tr>
<td>9</td>
<td>387</td>
<td>152</td>
</tr>
<tr>
<td>10</td>
<td>409</td>
<td>153</td>
</tr>
<tr>
<td>11</td>
<td>418</td>
<td>148</td>
</tr>
<tr>
<td>12</td>
<td>494</td>
<td>76</td>
</tr>
<tr>
<td>13</td>
<td>508</td>
<td>124</td>
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<tr>
<td>14</td>
<td>589</td>
<td>191</td>
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<tr>
<td>15</td>
<td>690</td>
<td>148</td>
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<tr>
<td>16</td>
<td>720</td>
<td>130</td>
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<td>17</td>
<td>750</td>
<td>160</td>
</tr>
<tr>
<td>18</td>
<td>780</td>
<td>151</td>
</tr>
<tr>
<td>19</td>
<td>816</td>
<td>97</td>
</tr>
<tr>
<td>20</td>
<td>865</td>
<td>80</td>
</tr>
<tr>
<td>21</td>
<td>897</td>
<td>208</td>
</tr>
<tr>
<td>22</td>
<td>1325</td>
<td>111</td>
</tr>
<tr>
<td>23</td>
<td>1940</td>
<td>141</td>
</tr>
<tr>
<td>24</td>
<td>2565</td>
<td>120</td>
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<tr>
<td>25</td>
<td>2802</td>
<td>139</td>
</tr>
<tr>
<td>26</td>
<td>4363</td>
<td>115</td>
</tr>
<tr>
<td>27</td>
<td>4500</td>
<td>113</td>
</tr>
<tr>
<td>28</td>
<td>4870</td>
<td>96</td>
</tr>
</tbody>
</table>

Total 32127 3207
### Factory by Location

<table>
<thead>
<tr>
<th>Region</th>
<th># of Factories</th>
<th># of Workers</th>
<th>% of Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dhaka</td>
<td>18</td>
<td>1982</td>
<td>61.8%</td>
</tr>
<tr>
<td>Chittagong</td>
<td>10</td>
<td>1225</td>
<td>38.2%</td>
</tr>
<tr>
<td>Total</td>
<td>28</td>
<td>3207</td>
<td>100%</td>
</tr>
</tbody>
</table>

### Factory by Size

<table>
<thead>
<tr>
<th>Size</th>
<th>% of Factories</th>
<th># of Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 100</td>
<td>14%</td>
<td>124</td>
</tr>
<tr>
<td>≥ 100 &lt; 300</td>
<td>4%</td>
<td>108</td>
</tr>
<tr>
<td>≥ 300 &lt; 500</td>
<td>25%</td>
<td>851</td>
</tr>
<tr>
<td>≥ 500 &lt; 1000</td>
<td>32%</td>
<td>1,289</td>
</tr>
<tr>
<td>≥ 1000 &lt; 2000</td>
<td>7%</td>
<td>252</td>
</tr>
<tr>
<td>≥ 2000</td>
<td>18%</td>
<td>583</td>
</tr>
</tbody>
</table>

**Average worker population Size**: 1147

**Average Years in Operation**: 11.6

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### Educational Background

- **No schooling**: 10%
- **Primary school**: 30%
- **Middle school**: 40%
- **High School**: 20%
- **University College**: 0%

**Male** and **Female**

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**Educational Background**

- **No schooling**: 10%
- **Primary school**: 30%
- **Middle school**: 40%
- **High School**: 20%
- **University College**: 0%
### Worker characteristics

<table>
<thead>
<tr>
<th>Worker characteristics</th>
<th>%</th>
<th>N</th>
<th>Average age</th>
<th>25.5 years</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>42.2</td>
<td>1,345</td>
<td>Juvenile Workers (14-17 Years Old)</td>
<td>2%</td>
<td>61</td>
</tr>
<tr>
<td>Female</td>
<td>57.8</td>
<td>1,843</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Highest Education</td>
<td>%</td>
<td></td>
<td>Above 57</td>
<td>0.2%</td>
<td>6</td>
</tr>
<tr>
<td>No schooling</td>
<td>9.2</td>
<td>292</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary school</td>
<td>32.9</td>
<td>1,047</td>
<td>Sewing</td>
<td>51.5</td>
<td>1,639</td>
</tr>
<tr>
<td>Middle school</td>
<td>34.9</td>
<td>1,112</td>
<td>Finishing</td>
<td>15.7</td>
<td>499</td>
</tr>
<tr>
<td>High school</td>
<td>18.4</td>
<td>587</td>
<td>Cutting</td>
<td>9</td>
<td>287</td>
</tr>
<tr>
<td>Vocational School or above</td>
<td>4.6</td>
<td>34</td>
<td>Embroidery</td>
<td>7.7</td>
<td>246</td>
</tr>
<tr>
<td>Position</td>
<td>%</td>
<td>115</td>
<td>Quality Control</td>
<td>6.7</td>
<td>214</td>
</tr>
<tr>
<td>Workers</td>
<td>93.1</td>
<td>2,954</td>
<td>Washing</td>
<td>4.7</td>
<td>149</td>
</tr>
<tr>
<td>Supervisors</td>
<td>5.7</td>
<td>180</td>
<td>Storage</td>
<td>1.9</td>
<td>60</td>
</tr>
<tr>
<td>Technicians</td>
<td>1.3</td>
<td>41</td>
<td>Packaging</td>
<td>1.7</td>
<td>55</td>
</tr>
<tr>
<td>Average length of service</td>
<td>2.6 years</td>
<td></td>
<td>Ironing</td>
<td>1.1</td>
<td>35</td>
</tr>
</tbody>
</table>
Fire Safety Knowledge

Answered Key Knowledge Questions Correctly

- % What To Do In Case of Emergency Question Correctly: 61%
- % Know Basic Ingredient to Start a Fire: 34%
- % Correctly Recognize All Potential Fire Hazards: 2%

Have You Been Trained on Fire Safety

- Male: 60%
- Female: 52%
Fire Safety - Knowledge

In a Fire alarm:

• 34% would respond as if there were a real fire.
• 32% would wait and see, because most are false alarms.
• 21% will contact security guards
• 13% will contact fire brigade

In an emergency:

• 61% know that all they need to do is to leave the area using designated escape routes.
• 24% think they should find shelter in a safe place inside of the building
• 17% think they should take the elevator to exit the building.

Fire Hazards

• Majority do not consider these as fire hazard:
  • an overfilled storage room (67%)
  • electrical wires under mats or carpets (52%)
Fire Safety - Knowledge

Certain Number of Fatal Fires Cannot Be Prevented

Perception of Fire Risk and Importance of Fire Drills

- % Correctly Recognize All Potential Fire Hazards
  - Male: 3%
  - Female: 2%

- % What To Do When the Fire Alarm Goes off
  - 37%

- 37%

- 32%

- Male
- Female

<table>
<thead>
<tr>
<th>Perception of Fire Risk and Importance of Fire Drills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most Fires Can Be Put Out Easily and Fast</td>
</tr>
<tr>
<td>No Fire Drills During Peak Season</td>
</tr>
</tbody>
</table>

- Strongly Disagree: 17%
- Disagree: 10%
- Neutral: 10%
- Agree: 8%
- Strongly Agree: 27%
FGD on Fire safety

Participants in 9/10 sessions report experiencing fire incidents

Causes of fire incidents and gaps in fire safety practices:

- Management refusing to let workers leave the building
- Improperly installed fire alarms
- Locked exits
- Blocked exits
- Fire incidents occurred in the ironing and storage rooms, canteen.
- Problem is acute before/during shipping periods, when cartons are left on stairs and hallways.

73% received formal H&S training when joined

15% being ‘briefly informed’ on H&S issues

5% had not received any training

H&S training often did not include fire safety
45% stated they had not been trained on fire safety.
Answered Key Awareness Questions by Fire Safety Training

- % Correctly Recognize Basic Elements to Start a Fire: 33% (Not Trained), 34% (Trained)
- % What To Do When the Fire Alarm Goes off: 30% (Not Trained), 37% (Trained)
- % What To Do In Cases of Emergency: 60% (Not Trained), 62% (Trained)
- % Correctly Recognize All Potential Fire Hazards: 2% (Not Trained), 3% (Trained)

- Workers Are Responsible for H&S: 42% (Not Trained), 48% (Trained)
- % Agree that Most Fires Can Be Put Out Easily and Fast: 67% (Not Trained), 64% (Trained)
- % Agree that Certain Number of Fires Cannot Be Prevented: 74% (Not Trained), 73% (Trained)
Building safety

Workers asked whether they would be willing to work on the top floors of a high building (e.g. 10th and 11th floor) for an additional 1000 taka.

65% said that they still would not be willing to work on upper floors, citing safety concerns.

Participants communicated that working on higher floors is riskier because it takes longer to get out of the building in an emergency.

Workers were asked whether they would prefer to
(1) work in a new building,
(2) stay in their current building and earn an extra 500 taka per month.

62% workers chose to stay in their familiar surroundings and would gladly take the additional money.

38% preferred to work in a new building cited safety concerns about the “old and fragile” buildings.
“Life is more important than money. If there was an accident, it would be tough to get out in time.”

“The building is about 15-20 years old, and it becomes fragile. It would be safer to work in a new building.”

“Male workers receive more training than female workers.”

“No evacuation drills in the evening for night shift workers.”

“When the flame got stronger, we started to run, but found that 3 out of 4 exits were closed.”

“I don't think I can leave the building safely in emergency as exits are closed most of the time.”

Workers voiced Concerns that drills take too much time and increase pressure on them to reach production targets during peak season.”
Who Is Responsible for H&S?

<table>
<thead>
<tr>
<th>Role</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security Guards</td>
<td>31%</td>
</tr>
<tr>
<td>EHS Committee</td>
<td>53%</td>
</tr>
<tr>
<td>Managers</td>
<td>44%</td>
</tr>
<tr>
<td>Supervisors</td>
<td>51%</td>
</tr>
<tr>
<td>Workers</td>
<td>46%</td>
</tr>
</tbody>
</table>

What Are Your Responsibilities?

- Report unsafe conditions: 67%
- Report all injuries: 51%
- Dress for the job & wear required PPE: 64%
- Know the emergency procedures: 52%
After a Day of Work Do You Feel Pain? (N= 2,100)

<table>
<thead>
<tr>
<th>Condition</th>
<th>%</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neck Ache</td>
<td>51.8%</td>
<td>1,087</td>
</tr>
<tr>
<td>Pain in Legs and/or Feet</td>
<td>48.8%</td>
<td>1,025</td>
</tr>
<tr>
<td>Bad Headaches</td>
<td>45%</td>
<td>945</td>
</tr>
<tr>
<td>Pain in Arms and/or Hands</td>
<td>38.6%</td>
<td>810</td>
</tr>
<tr>
<td>Backache</td>
<td>35.8%</td>
<td>751</td>
</tr>
<tr>
<td>Sore Eyes</td>
<td>21.7%</td>
<td>456</td>
</tr>
<tr>
<td>Stomachache</td>
<td>20.8%</td>
<td>436</td>
</tr>
<tr>
<td>Pain in Waist</td>
<td>17%</td>
<td>356</td>
</tr>
<tr>
<td>Pain in Ears</td>
<td>3.5%</td>
<td>74</td>
</tr>
<tr>
<td>Skin (Feeling Itchy or Hot)</td>
<td>3.5%</td>
<td>73</td>
</tr>
</tbody>
</table>

Do You Feel Pain After a Full Day of Work? (N=3,184)

- Storage: 50% Yes, 50% No
- Cutting: 47% Yes, 53% No
- Sewing: 29% Yes, 71% No
- Washing: 40% Yes, 60% No
- Embroidery: 52% Yes, 48% No
- Finishing: 35% Yes, 65% No
- Ironing: 51% Yes, 49% No
- Packing: 27% Yes, 73% No
- Quality Control: 32% Yes, 68% No
Types of Accidents and PPE use

PPE use

- Provided with PPE: 92%
- Only wear PPE when buyers visit: 25%
- PPE is uncomfortable to use: 18%
- No training on purpose of PPE and correct usage: 50%

Types of Accidents Experienced/Witnessed

<table>
<thead>
<tr>
<th>Type of Accident</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machinery Injury</td>
<td>34%</td>
</tr>
<tr>
<td>Fire</td>
<td>19%</td>
</tr>
<tr>
<td>Electric Shock</td>
<td>12%</td>
</tr>
<tr>
<td>Occupational Disease (Allergies, Chemical Poisoning)</td>
<td>6%</td>
</tr>
<tr>
<td>Hazardous Material Spills</td>
<td>5%</td>
</tr>
</tbody>
</table>

Provided with PPE: 92%

Only wear PPE when buyers visit: 25%

PPE is uncomfortable to use: 18%

No training on purpose of PPE and correct usage: 50%
**H & S committees**

- 92% indicate there is a H&S or fire safety committee in their factory.
- 88% say that worker reps are part of these committees.
- 59% indicate having participated in activities organized by these committees.
- Workers elect only 39% of reps, while management appoints 53%.
- 66% say they have contacted the rep about H&S issues.

Feedback by participants suggests that worker committees may not be as active or inclusive as the survey numbers suggest.

Several FGD participants point out that the committees are inactive or semi-active, and that management is often not supportive of the committee activities.
Considerable gaps on fire safety knowledge and awareness

Training with limited impact

Female and less educated workers are vulnerable

Worker representative structures have potential

Absence of worker representative structure

Workers not concerned about health and safety

• Workers have a limited sense of responsibility to prevent fires.

• Training does not consider education level/information needs.

• They receive less training and are less informed.

• H&S committees insufficiently driving worker participation.

• Supervisors are primary channel for complaints/concerns

• Workers are not too concerned about H&S
  • Young workers show a greater concern for H&S
Outline

I. Occupational Health

II. Garment Industry of Bangladesh

III. Baseline Survey by Alliance

IV. Interventions by Alliance

V. Rana Plaza Survivors Study

VI. Employment for people with disability
The Alliance for Bangladesh Worker Safety will substantially improve worker safety in RMG industry, by upgrading factories, educating workers and management, empowering workers, and building institutions that can enforce and maintain safe working conditions.

**Operational Model (Draft)**

**Inspection & Remediation**
1. Factory Inspections
2. Enhanced and Aligned Fire Safety and Structural Integrity Standard
3. Public Disclosure
4. Purchasing Practices to Support Safety Improvements

**Remediation**
5. Factory Remediation
6. Access to Finance
7. Mitigate Financial Fisk for Workers
8. Spill-Over Effects to Members’ Own Programs and Prevent Unauthorized Subcontracting

**Worker Empowerment**
9. Worker Helpline
10. Worker Committees
11. Improved Worker-Management Relations
12. Develop Capacity of Worker Representative and Unions
13. Empowering Women
14. Workers and Management
15. Key Fire Prevention & Protection Positions
16. High Risk Positions
17. In-House Fire Safety Management Capacity Development
18. Mid-Level Manager Education
19. Support the Implementation of NTPA
20. Stakeholder Engagement
21. Knowledge Transfer and Capacity Building
Impact assessment
Outline

I. Occupational Health

II. Garment Industry of Bangladesh

III. Baseline Survey by Alliance

IV. Interventions by Alliance

V. Rana Plaza Survivors Study

VI. Employment for people with disability
The study population consisted of the Rana Plaza disaster survivors. We conducted interviews on a sample of them receiving treatment/rehab care at Centre of Rehabilitation of the Paralysed (CRP) one year post-event. CRP provided care for 517 victims.

Between April 22 and May 22, 2014; we administered
- Demographic survey,
- Post Traumatic Stress Disorder Checklist Specific version (PCL-S),
- WHO Disability Assessment Schedule (WHODAS)
- Upper extremity strength by dynamometer-hand grip (HG)
- Lower extremity strength using 5 time sit-to-stand test (STS).
- Self-efficacy

Acknowledgments:
CRP for proving the logistics.
Deutsche Gesellschaft fueer Internationale Zusammenarbeit (GIZ) for partially funding the research
Hari Krishna Raju Sagiraju at the UTSPH for statistical analysis
## Demographic Results

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Male</th>
<th>Female</th>
<th>%</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>n (%)</strong></td>
<td>181</td>
<td>71</td>
<td>110</td>
<td>39.2</td>
<td>60.8</td>
</tr>
<tr>
<td><strong>Age (mean) years</strong></td>
<td>27.8</td>
<td>28.5</td>
<td>27.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Number of dependents (mean)</strong></td>
<td>2.6</td>
<td>2.4</td>
<td>2.7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Marital status

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>%</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>138</td>
<td>51</td>
<td>71.8</td>
<td>79.1</td>
</tr>
<tr>
<td>Single</td>
<td>38</td>
<td>19</td>
<td>26.8</td>
<td>17.3</td>
</tr>
<tr>
<td>Divorced</td>
<td>4</td>
<td>1</td>
<td>1.4</td>
<td>2.7</td>
</tr>
<tr>
<td>Widowed</td>
<td>1</td>
<td>0</td>
<td>0.0</td>
<td>0.9</td>
</tr>
</tbody>
</table>

### Education

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>%</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No school</td>
<td>42</td>
<td>4</td>
<td>5.6</td>
<td>34.5</td>
</tr>
<tr>
<td>Primary</td>
<td>62</td>
<td>12</td>
<td>16.9</td>
<td>45.5</td>
</tr>
<tr>
<td>Secondary</td>
<td>61</td>
<td>41</td>
<td>57.4</td>
<td>18.2</td>
</tr>
<tr>
<td>College</td>
<td>11</td>
<td>9</td>
<td>12.7</td>
<td>1.8</td>
</tr>
<tr>
<td>University</td>
<td>5</td>
<td>5</td>
<td>7.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

### Previous monthly income (Mean)

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>TK 13,406</td>
<td>26.8</td>
<td>47.3</td>
</tr>
<tr>
<td>TK 7,481</td>
<td>33.8</td>
<td>7.3</td>
</tr>
</tbody>
</table>

### Position worked

<table>
<thead>
<tr>
<th>Position</th>
<th>Male</th>
<th>Female</th>
<th>%</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production worker</td>
<td>19</td>
<td>52</td>
<td>26.8</td>
<td>47.3</td>
</tr>
<tr>
<td>Clerical</td>
<td>24</td>
<td>8</td>
<td>33.8</td>
<td>7.3</td>
</tr>
<tr>
<td>Line Supervisor</td>
<td>9</td>
<td>2</td>
<td>12.7</td>
<td>1.8</td>
</tr>
<tr>
<td>Technician/Engineer</td>
<td>12</td>
<td>39</td>
<td>16.9</td>
<td>35.5</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
<td>9</td>
<td>8.5</td>
<td>8.2</td>
</tr>
<tr>
<td>None</td>
<td>1</td>
<td>0</td>
<td>1.4</td>
<td>0.0</td>
</tr>
</tbody>
</table>

### Department worked

<table>
<thead>
<tr>
<th>Department</th>
<th>Male</th>
<th>Female</th>
<th>%</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage</td>
<td>0</td>
<td>2</td>
<td>1.8</td>
<td></td>
</tr>
<tr>
<td>Cutting</td>
<td>6</td>
<td>5</td>
<td>8.5</td>
<td>4.5</td>
</tr>
<tr>
<td>Sewing</td>
<td>27</td>
<td>86</td>
<td>38.0</td>
<td>78.2</td>
</tr>
<tr>
<td>Finishing</td>
<td>8</td>
<td>8</td>
<td>11.3</td>
<td>10.9</td>
</tr>
<tr>
<td>Ironing</td>
<td>1</td>
<td>0</td>
<td>1.4</td>
<td>0.0</td>
</tr>
<tr>
<td>Quality control</td>
<td>15</td>
<td>3</td>
<td>21.1</td>
<td>2.7</td>
</tr>
<tr>
<td>Other</td>
<td>12</td>
<td>2</td>
<td>16.9</td>
<td>1.8</td>
</tr>
<tr>
<td>None</td>
<td>2</td>
<td>0</td>
<td>2.8</td>
<td>0.0</td>
</tr>
</tbody>
</table>
179 completed a HG test (men = 61.1 lb; women = 36.4 lb).

127 completed STS (men = 18.7s; women = 20.7s).

Disability mean score: 49.8 (SD 17.5); women scoring higher than men (51.2 vs 47.7).

<table>
<thead>
<tr>
<th>Current Employment Status</th>
<th>Total</th>
<th>%</th>
<th>Male</th>
<th>%</th>
<th>Female</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full time</td>
<td>1</td>
<td>0.6%</td>
<td>1</td>
<td>1.4%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Part-time</td>
<td>2</td>
<td>1.1%</td>
<td>2</td>
<td>2.8%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Self-Employed</td>
<td>27</td>
<td>14.9%</td>
<td>12</td>
<td>16.9%</td>
<td>15</td>
<td>13.6%</td>
</tr>
<tr>
<td>Looking for employment</td>
<td>4</td>
<td>2.2%</td>
<td>1</td>
<td>1.4%</td>
<td>3</td>
<td>2.7%</td>
</tr>
<tr>
<td>Not looking</td>
<td>24</td>
<td>13.26%</td>
<td>10</td>
<td>14.1%</td>
<td>14</td>
<td>12.7%</td>
</tr>
<tr>
<td>Unemployed because of health</td>
<td>120</td>
<td>66.3%</td>
<td>44</td>
<td>62%</td>
<td>76</td>
<td>69.1%</td>
</tr>
<tr>
<td>House Wife</td>
<td>2</td>
<td>1.1%</td>
<td>0</td>
<td>0%</td>
<td>2</td>
<td>1.8%</td>
</tr>
</tbody>
</table>

### Financial Compensation

| Received promised compensation | 55.80% |
| Received all of what they were promised | 2.21% |
| Received a quarter of what they were promised | 28.73% |
| Received less than a quarter of what they were promised | 59.67% |
| Received nothing of what they were promised | 5.52% |

Only one person reported receiving an amount that recovered all the losses he/she incurred.

### Where Do you Work?

- Baker: 1
- Cattle Raising: 4
- Computer Banking: 1
- Grocery shop: 9
- Shopkeeper: 14
- Tailor: 2
Preliminary Results

- PTSD-75.69%
- Women-85%
- No education-85%
- Married-82%

- 36.5% injuries were due to fracture; 27.1% were due compression.
- 35.9% of injuries affected the back; 30.4% affected lower extremities.

The participants spent an average of 25 days in a hospital after the incident.

Only 37.02% received mental counseling.

Of those with PTSD, only 22.65% received over 4 hours counseling.
Outline

I. Occupational Health

II. Garment Industry of Bangladesh

III. Baseline Survey by Alliance

IV. Interventions by Alliance

V. Rana Plaza Survivors Study

VI. Employment for people with disability Study
Employment for women with disability

Identify and understand the facilitators and barriers of employment for women with disabilities in the garment sector.

Follow the labor force re-integration outcome of employed women with disabilities and the effectiveness of the training programs to make them job-ready.

Investigate the human resource policy and physical measure interventions at the factory level to accommodate these workers and examine existing macro level policy interventions from the Government side.