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Analysis of Firefighters' Psychological Trauma and Interrupted Domains

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BACKGROUND

Firefighters are 10% more likely to have poor mental health and related behaviors due to high trauma exposure and intensity (Substance Abuse and Mental Health Services Administration, 2018). Specifically, firefighters are at a high risk of experiencing posttraumatic stress, anxiety, depression (Teoh et al., 2019), suicidality, substance abuse (Bing-Canar et al., 2019), and burnout (Teoh et al., 2019).

PROBLEM

Firefighters are regularly exposed to traumatic events on calls which results in their decreased mental health; and associated decreased participation in meaningful occupations, routines, and roles (Edgelow & Cramm, 2020; Edgelow et al., 2021; Wittwer et al., 2021).

PURPOSE

Research Purpose:

Understand how firefighter demographics interact with interrupted occupations, routines, and roles and at what frequency when faced with work-related psychological trauma and stress (Edgelow et al., 2021; Gulliver et al., 2021; Pennington et al., 2022).

Program Purpose:

Educate firefighters on ways to re-engage in interrupted occupations, routines, and roles to reduce the negative effects of work-related psychological trauma (Edgelow & Cramm, 2020; Torchalla et al., 2019).

RESEARCH

Methods:

- Original quantitative assessment: "Firefighter Health and Wellness Functional Impact Survey"
 - 32 questions on impairments in occupation, routines, and role identity when coping with work-related psychological trauma
- Pen-and-paper
- Likert scales measuring frequency

Results:

- There is no relationship between the number of years of experience as a firefighter and occupational participation.
- There is no relationship between the type of job assignment and occupational participation.
- There is no relationship between the number of years of experience as a firefighter and changes in routine participation.
- There is a relationship between the number of years as a firefighter and participation in varied occupations, routine changes, and role identification. (Figure 1)
- There is a relationship between marital status and participation in varied occupations, routine changes, and role identification. (Figure 2)

Discussion:

- After 3-6 years, work-related trauma significantly affects functional participation.
- There is a decline in functional participation from 11-14 years up to 19-22 years when the firefighters retire.
- Single firefighters had significantly better functional outcomes than those in a relationship and/or divorced.
- Married firefighters had significantly better functional outcomes than those in a relationship but not married.

Future Recommendations:

- Different ranks and stress
- Trauma processing with rescue to engine switch
- Effects of children with work stress
- Better look at nuanced marital statuses
- Longitudinal study after a critical incident
- Qualitative or mixed methods study

PROGRAM

Design:

- 30-minute workshop presentation
- Guided self-reflection
- Education on functional coping mechanisms for work-related trauma

Outcomes:

- Overall, results showed that participants found the workshop content and delivery interesting, useful, and informative.
- Most found the mental health statistics shocking and eye-opening.

Future Recommendations:

- Implementation at every level (cadets, recruits, probationary firefighters, active firefighters, administration, soon-to-be retirees, etc.)
- Similar program for firefighter spouses and partners
- Advocacy for administration and local council members to improve policies and mental health resources

Figure 1

Two-Way ANOVA Without Replication of Years of Firefighting Experience and Average Total Scores for Each Survey Domain

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	2282.42	2	1141.21	52.6	.00000009***	3.63
Columns	471.18	8	58.9	2.71	0.04*	2.59
Error	347.15	16	21.7			
Total	3100.75	26				

*p ≤ .05. **p ≤ .01. ***p ≤ .001.

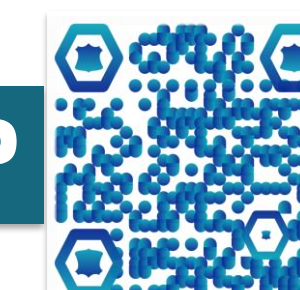
Figure 2

Two-Way ANOVA Without Replication of Marital Status and Average Total Scores for Each Survey Domain

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	845.99	2	423	6.13	0.01**	3.89
Columns	489.8	6	81.63	1.18	0.38	3
Error	828.31	12	69.03			
Total	2164.1	20				

*p ≤ .05. **p ≤ .01. ***p ≤ .001.

WORKSHOP



REFERENCES

