```python
# Import libraries
import matplotlib.pyplot as plt
import seaborn as sns

# ------------------------------
# Background:
# This bar chart presents the results of the qualitative coding process
applied to open-ended survey responses.
# Participants provided narrative reflections as part of Survey 2 and
Survey 3.
#
# Coding Process:
# Using thematic analysis, participant quotes were categorized into four
emergent themes:
# - Post-Work Fatigue
# - Irritability or Emotional Withdrawal
# - Recovery Routines
# - Support and Communication
#
# Each theme was derived inductively from the language used by
participants.
# Keywords such as "tired," "irritable," "shower," and "talk" guided the
classification.
#
# Purpose:
# This figure shows how frequently each theme appeared, providing a
visual breakdown of participant focus areas.
# It supports the argument that coping strategies and emotional response
patterns shift with environmental stress.
# ----------------------------

# Data
themes = [
    'Post-Work Fatigue',
    'Irritability or Emotional Withdrawal',
    'Recovery Routines',
    'Support and Communication'
]
quote_counts = [7, 6, 10, 3]

# Colors matched to earlier gradient theme
colors = ['#3B0F70', '#4F67A5', '#2FA3A0', '#7AD66B']

# Plot
plt.figure(figsize=(10, 6))
bars = plt.bar(themes, quote_counts, color=colors, edgecolor='black')

# Title and labels
plt.title('Distribution of Participant Quotes by Emergent Theme',
fontsize=14)
plt.ylabel('Number of Quotes')
plt.xticks(rotation=20)
```

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# Annotate each bar
for bar, count in zip(bars, quote_counts):
    plt.text(bar.get_x() + bar.get_width() / 2, count + 0.2, f'{count} quotes',
             ha='center', va='bottom', fontsize=10)

plt.tight_layout()
plt.show()
```


Distribution of Participant Quotes by Emergent Theme