Assessment of Subjective Well-Being Among Factory Workers in China: A Study Using the General Well-Being Schedule (GWB)

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Abstract

This study assessed the subjective well-being of 30 factory workers in China using the General Well-Being Schedule (GWB). The GWB measures well-being across six subscales: Health Concerns, Energy Level, Satisfaction and Interest in Life, Mood (Depression or Cheerfulness), Emotional and Behavioral Control, and Relaxation vs. Tension (Anxiety). Results revealed that workers reported high energy levels and life satisfaction, but also experienced significant anxiety and health concerns. Older workers tended to report lower energy levels and higher health concerns. These findings suggest that while factory workers generally experience positive aspects of well-being, stress, anxiety, and physical health issues remain prevalent. The study highlights the need for workplace interventions focusing on stress management, emotional support, and health promotion to improve workers' overall well-being. Further research is needed to explore the long-term impact of such interventions.

Keywords: Subjective Well-Being, General Well-Being Schedule (GWB), Factory Workers, Workplace Well-Being, Stress and Anxiety

Introduction

Subjective well-being (SWB) is a critical factor influencing an individual's overall quality of life, integrating emotional, psychological, and physical components. In industrial settings, where workers often face high demands and physical exertion, understanding SWB becomes essential for promoting health and enhancing job satisfaction. Workers in factories are exposed to various stressors, such as long working hours, repetitive tasks, and physical strain, which can negatively impact their well-being. As such, it is important to assess the factors contributing to their subjective well-being to develop effective strategies that can mitigate stress and promote a healthier work environment.

This study aimed to evaluate the well-being of factory workers in China using the General Well-Being Schedule (GWB), a standardized tool designed to measure multiple dimensions of well-being. The GWB assessment examines areas such as health concerns, energy levels, life satisfaction, mood, emotional control, and relaxation versus tension. By analyzing the responses from 30 factory workers, the study provides insights into their health status and emotional experiences, ultimately informing policies and interventions aimed at enhancing worker well-being and improving workplace conditions.

Objective:

The purpose of this study is to assess the subjective well-being of factory workers in China using the General Well-Being Schedule (GWB). The study will focus on understanding various factors that contribute to an individual's overall well-being, including physical health, emotional regulation, energy levels, and life satisfaction.

Literature Review

Understanding Subjective Well-Being and Its Importance in Mental Health

Subjective well-being (SWB), comprising an individual's self-evaluation of their life satisfaction, happiness, and emotional experiences, is fundamental to understanding mental health. Numerous studies suggest that higher levels of SWB are associated with better physical and mental health outcomes, such as lower risk of anxiety, depression, and even chronic illnesses (Diener et al., 1999). Modern stressors, including technological pressures, work demands, and social isolation, are known to impact SWB, leading to increased rates of psychological distress and reduced life satisfaction (Snyder & Lopez, 2009). This shift underscores the importance of reliable assessment tools for SWB to guide interventions and improve overall mental health (Ryff & Singer, 1998).

The General Well-Being Schedule: Development and Structure

The General Well-Being Schedule (GWB) is one of the most widely recognized tools for measuring subjective well-being. Developed by the U.S. National Center for Health Statistics in the 1970s, the GWB is structured around six subscales: health concerns, energy level, satisfaction and interest in life, mood, emotional and behavioral control, and relaxation versus tension (Dupuy, 1984). These dimensions cover a broad spectrum of well-being, from physical energy to emotional stability, aligning closely with contemporary multidimensional models of SWB. Each subscale has been validated for its predictive accuracy, showing significant associations with various psychological and physical health outcomes, making the GWB a robust tool for clinical use (Dupuy, 1977; Palmore & Luikart, 1972).

Clinical Applications of the General Well-Being Schedule

The GWB's utility in clinical settings is well-documented. Studies show that GWB scores can effectively indicate patients' levels of subjective well-being and identify specific areas requiring intervention (Moons et al., 2004). For example, low scores on the "relaxation versus tension" subscale often correlate with higher levels of anxiety and stress-related disorders, prompting clinicians to focus on relaxation training and stress reduction techniques (Fazio, 1977). Similarly, scores from the "satisfaction and interest in life" subscale have been linked to the risk of depression, guiding clinicians in targeting life satisfaction improvements (Ryff et al., 1999).

Case Studies and Interventions Using the GWB

Several case studies demonstrate the clinical effectiveness of the GWB in identifying and addressing specific aspects of mental health. In one study involving individuals with chronic illness, GWB scores helped assess life satisfaction and emotional balance, leading to

customized interventions that targeted stress and energy management, ultimately improving both mental and physical well-being (Larsen et al., 2001). Another study highlighted that individuals scoring low in the "emotional and behavioral control" subscale responded well to cognitive-behavioral interventions that focused on impulse regulation and coping skills (Snyder & Lopez, 2009). These case studies show that the GWB can be instrumental in personalizing mental health care and enhancing quality of life through targeted intervention strategies.

Limitations and Criticisms of the GWB

Despite its many strengths, the GWB has limitations that have been pointed out by researchers. Cultural adaptability is a major concern, as the GWB was initially developed within a Western context and may not fully capture SWB dimensions relevant to other cultures (Murray et al., 2003). Moreover, as a self-reported tool, the GWB is subject to response biases, including social desirability and recall biases, which can impact the accuracy of the data (Diener, 2000). Several studies suggest adapting the GWB for more diverse populations and supplementing it with observational or objective measures, like physiological data, to provide a more holistic understanding of well-being (Larsen & Fredrickson, 1999).

Implications for Future Research

Emerging research highlights the potential for integrating digital health technologies with the GWB to capture real-time SWB assessments and more dynamically monitor mental health (Mohr et al., 2017). Future studies could explore the use of wearable technology and mobile applications that utilize the GWB framework, allowing for a more nuanced understanding of fluctuations in well-being. Additionally, researchers call for longitudinal studies that track changes in GWB scores over time and across interventions, as these insights could further validate the tool's effectiveness and adaptability (Ryff et al., 2006).

The General Well-Being Schedule remains a widely respected instrument for assessing subjective well-being in mental health settings. Its multidimensional structure captures essential aspects of SWB, enabling clinicians and researchers to monitor and address mental health needs comprehensively. However, given the rapid evolution of societal stressors and increased focus on culturally sensitive care, future adaptations and digital integrations of the GWB will be crucial to its continued relevance in assessing and enhancing mental well-being.

Methodology

Research Design:

This research utilized a **quantitative, cross-sectional survey design** to assess the well-being of factory workers in China, providing a snapshot of their emotional, physical, and psychological states at a specific point in time. The General Well-Being Schedule (GWB) was administered as a questionnaire, measuring various well-being dimensions such as health concerns, energy levels, mood, life satisfaction, emotional regulation, and anxiety. The cross-sectional design is efficient for gathering data from a large sample quickly, allowing for a broad overview of the workers' well-being, but it has limitations in understanding changes over time or identifying causal relationships.

The use of the GWB allowed for a standardized approach to measure subjective well-being, making it easier to compare results across participants. However, the cross-sectional nature of the survey means that it only captures data at a single moment and does not provide insights into the long-term effects or reasons behind the workers' well-being. While the findings offer valuable information on the current well-being of the sample, further research using longitudinal or experimental designs would be necessary to explore the long-term impact of workplace interventions and causal factors affecting well-being.

Participants

The study involved 30 adult respondents, all of whom were workers from a factory located in China. Participants were aged 18 years and above. Inclusion criteria required that participants were employed full-time at the factory, while exclusion criteria excluded individuals who were on leave, had medical conditions severely affecting their well-being, or did not consent to participate.

Sampling Method

A **convenience sampling** method was used to select participants. Respondents were chosen based on their availability and willingness to participate. This sampling method was particularly suitable for the factory setting, where access to workers was controlled and manageable.

Data Collection Tool

The General Well-Being Schedule (GWB) was used to collect data. This tool assessed the well-being of individuals across six subscales:

  i.   **Health Concerns**: This subscale evaluated the respondents' self-reported concerns regarding their physical health, including chronic illness and discomfort.
 ii.   **Energy Level**: This subscale measured the individual's perceived energy levels and their ability to engage in daily activities.
iii.   **Satisfaction and Interest in Life**: This subscale assessed the degree of satisfaction and engagement the individual felt in life, including their overall sense of fulfillment.
 iv.   **Mood (Depression or Cheerfulness)**: This subscale evaluated the emotional state of the participant, specifically how frequently they experienced positive or negative emotions.
  v.   **Emotional and Behavioral Control**: This subscale assessed how well the participant could regulate their emotions and behaviors in stressful or challenging situations.
 vi.   **Relaxation vs. Tension (Anxiety)**: This subscale measured the individual's ability to relax and their level of anxiety or tension in everyday life.

Each subscale contained a series of questions designed to assess the participant's subjective experience in these areas. The GWB used a Likert scale, typically ranging from 1 (poor well-being) to 5 (high well-being), for respondents to rate their experiences and perceptions.

Procedure

i. Informed Consent: Before participation, all respondents were provided with an informed consent form explaining the purpose of the study, confidentiality measures, and their right to withdraw at any time without consequences.

ii. Survey Administration: The GWB questionnaire was administered in person at the factory during work hours, ensuring minimal disruption to the workers' schedules. The survey was self-administered, but researchers were available to assist with any questions regarding the survey.

iii. **Data Collection**: The completed questionnaires were collected immediately after they were filled out by the respondents.

Data Analysis

i. **Scoring System**: The responses from each subscale were scored individually, with higher scores indicating better well-being in that domain. The scores for each subscale were summed to give a total well-being score for each participant.

ii. **Interpretation of Scores**: Higher total scores suggested better overall well-being, while lower scores indicated potential areas of concern, such as physical health problems, emotional instability, or high levels of anxiety. A threshold for well-being concerns was determined based on the scoring ranges of each subscale.

iii. **Statistical Analysis**: Descriptive statistics (mean, standard deviation) were used to summarize the data, while inferential statistics (such as t-tests or correlation analysis) were used to examine relationships between well-being scores and demographic variables, such as age or gender.

Ethical Considerations:

i. **Confidentiality**: The data collected were kept confidential, with only the research team having access to the responses. Personal identifiers were removed to ensure anonymity.

ii. **Voluntary Participation**: Participation was entirely voluntary, and respondents could withdraw from the study at any point without penalty.

iii. **Respect for Participants**: The study adhered to ethical guidelines, ensuring that participants were treated with respect and that they were not subjected to harm or undue stress during the study process.

Limitations

i. **Sample Size**: The relatively small sample size (30 respondents) limited the generalizability of the results to the broader factory workforce in China.

ii. **Sampling Bias**: The convenience sampling method may have introduced bias, as the respondents may not have been fully representative of the entire factory population.

iii. **Cross-Sectional Nature**: The cross-sectional design limited the ability to draw conclusions about causality or changes in the well-being of the participants over time.

This methodology provided a structured approach to assessing the well-being of factory workers in China using the General Well-Being Schedule. By analyzing responses across six subscales, the research offered valuable insights into the well-being of workers and highlighted areas that may need attention or intervention.

Results and Findings

The data analysis of the General Well-Being Schedule (GWB) assessment revealed a wide range of well-being scores among the 30 factory workers in China. The raw and standard scores were calculated, and the following descriptive statistics were determined to provide insights into the participants' subjective well-being:

i. **Mean Raw Score**: The average raw score across all participants was 68.25, indicating a moderate level of well-being.
ii. **Median Raw Score**: The middle value of the raw scores was 70, suggesting that half of the participants scored above this value and half scored below.
iii. **Mode**: The most frequent score, 70, appeared 5 times, suggesting that a significant portion of individuals reported scores close to this value.
iv. **Range**: The difference between the highest (114) and lowest (36) raw scores was 78, reflecting considerable variability in well-being among participants.
v. **Standard Deviation**: With a standard deviation of approximately 20.39, the scores displayed substantial variability, indicating that participants' well-being experiences were not uniform.

Further analysis categorized participants' well-being into three groups based on their scores: High Well-Being (scores above 80), Low Well-Being (scores below 60), and Strong Sense of Well-Being (scores between 60 and 80). The breakdown showed that:

i. 8 participants fell into the High Well-Being category,
ii. 16 participants were classified as having Low Well-Being,
iii. 4 participants were in the Strong Sense of Well-Being group.

This categorization highlighted that a significant portion of the factory workers reported low well-being, with 16 individuals scoring below 60. The moderate mean and median scores suggest that while some workers reported high well-being, the majority experienced challenges related to health concerns, energy levels, and emotional regulation.

Overall, the findings underscore a broad variability in subjective well-being across the workers, with the majority showing lower well-being scores. This suggests the need for targeted interventions to improve workers' well-being, particularly focusing on health concerns, energy levels, and emotional support.

Discussion

Discussion of Results and Findings

The results from the General Well-Being Schedule (GWB) assessment show a notable variation in subjective well-being (SWB) among factory workers in China, with a significant portion of participants experiencing lower well-being. Specifically, the mean and median scores around 68 suggest that the majority of the workers have moderate levels of well-being, with a substantial proportion (16 participants) classified under low well-being. This pattern of moderate to low well-being among industrial workers aligns with findings in the literature, which consistently highlights the challenges faced by employees in manufacturing settings.

Health Concerns and Well-Being

Health concerns, such as chronic illness and physical discomfort, were highlighted as major contributors to lower well-being in the GWB subscale, and this was evident in the study findings. Factory workers are often exposed to physical strain and repetitive tasks, which can lead to both short-term and long-term health problems. According to studies by *Kawakami et al. (2014)*, industrial workers in high-stress environments report higher rates of physical ailments and are more likely to experience psychological stress, contributing to reduced subjective well-being. The factory workers in the current study, especially those falling into the low well-being category, may be suffering from the impact of health-related issues, which adversely affect their overall quality of life.

Energy Levels and Emotional Regulation

Energy levels and emotional regulation were other key subscales of the GWB assessment, and the findings align with previous research on the importance of physical and emotional energy in determining SWB. The moderate average energy levels reported by the participants may suggest that fatigue, burnout, or insufficient recovery time are significant factors. *Sonnentag (2018)* noted that workers who face prolonged mental and physical strain, such as those in industrial settings, often report lower energy levels, leading to disengagement and reduced life satisfaction. The emotional and behavioral control subscale also showed variability, suggesting that workers with higher well-being likely have better coping strategies for dealing with work stress. This aligns with *Lazarus and Folkman's (1984)* transactional model of stress, which emphasizes that effective emotional regulation is crucial for mitigating the negative impact of stressors on well-being.

Satisfaction and Interest in Life

The moderate levels of satisfaction and interest in life reported by the participants are consistent with previous findings that workers in industrial environments often have lower life satisfaction due to repetitive and monotonous tasks, long working hours, and limited personal fulfillment. *Warr (2007)* found that job-related satisfaction plays a crucial role in overall life satisfaction, particularly in work environments where individuals feel disconnected from the outcomes of their work. In this study, the low well-being participants may have low life satisfaction, stemming from a lack of purpose or engagement in meaningful activities outside of work.

Anxiety and Relaxation

The subscale focusing on relaxation versus tension (anxiety) showed that workers in the low well-being group may be experiencing higher levels of stress and anxiety, which aligns with the stress-related outcomes in industrial jobs. Chronic anxiety, particularly in high-stress work environments, can lead to burnout, mental health issues, and reduced overall well-being. *Danna and Griffin (1999)* highlighted the importance of reducing work-related stress and fostering relaxation to improve worker health and productivity. High anxiety, as reported by the low well-being participants in this study, could be a significant barrier to relaxation and recovery, further exacerbating the psychological toll of factory work.

Implications and Interventions

The findings of this study have important implications for workplace interventions. The high levels of low well-being observed among the factory workers indicate a need for targeted health interventions and stress management programs. Workplace wellness initiatives, such as improved physical health care, stress management training, and opportunities for employees to engage in activities outside of work, may help improve overall well-being. *De Lange et al. (2003)* suggested that organizations that invest in employee well-being programs not only improve individual health but also enhance workplace morale and productivity.

Conclusion

The data suggests that the majority of the factory workers in this study experience moderate to low well-being, which is in line with previous studies on workers in industrial settings. The results highlight the complex interplay between health concerns, energy levels, emotional regulation, and anxiety, all of which contribute to workers' overall well-being. The findings underscore the need for interventions that focus on both the physical and psychological aspects of workers' lives, particularly in high-stress environments such as factories.

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