

Original Article

Types of perception of work-life balance among MZ generation nurses: A Q methodology approach

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ABSTRACT

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**Background & Aims:** Research on the types of work-life balance perceptions among MZ generation nurses is essential for improving collaboration and communication within organizations. The study aimed to identify the types of role perceptions regarding work-life balance (WLB) among MZ generation nurses.

**Materials & Methods:** The Q methodology was applied, selecting 36 Q samples from a population of 190, which were extracted from literature and in-depth clinical interviews with preceptors, new nurses, and nursing managers. The P sample consisted of 40 MZ generation nurses who had experience as preceptors regarding work-life balance. The Q samples were classified into a quasi-normal distribution frame and measured on a nine-point scale. Data were analyzed using the PQ Method program.

**Results:** Q factor analysis of the subjective perceptions of MZ generation nurses regarding WLB revealed four types: 'Organizational-Culture-Oriented,' 'Personal-Goal-Oriented,' 'Organizational-Culture-Dissatisfied,' and 'Emotional -Stability-Oriented.' These four types explained 54.1% of the total variance.

**Conclusion:** The findings suggest that MZ generation nurses prioritize mental satisfaction and quality of life over economic compensation. Therefore, organizations can improve job satisfaction and organizational commitment among nurses by providing multidimensional support that reflects their diverse needs.

Introduction

MZ generation (a collective term for Millennials and Generation Z) is reported to have different work ethics and life values compared to previous generations (1, 2). This generation, which includes Millennials born in the early 1980s to the early 2000s and Generation Z born in the mid-1990s to the early 2010s, is the first to grow up with the rapid development of digital technology, experiencing socioeconomic and cultural changes (3). The MZ generation opposes authoritarianism, values individual autonomy and individuality, and is characterized by sensitivity to digital technology, social issues, and privacy protection (4). The MZ generation exhibits different consumption patterns and career choices compared to previous generations, exerting a unique

influence. Companies and organizations are making various efforts to adapt to their needs (5). For example, policies such as flexible working hours, remote work, and the enhancement of diversity and inclusion can be seen as changes that reflect the needs of the MZ generation (3).

The MZ generation is reported to prioritize whether a job aligns with their personal life and values over economic rewards when making career choices. They place great importance on work-life balance and prefer work environments that respect their personal lives, such as flexible working hours or remote work (6). This tendency is also prominent among clinical nurses, with younger MZ generation nurses in particular reported to place a higher emphasis on work-life balance, valuing the balance between their professional and personal lives (5, 7).

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Work-life balance, commonly referred to by the recent buzzword 'Work-life balance (WLB)', represents a state in which workers are satisfied with their personal lives by harmoniously managing their time and energy between work and life (8, 9). Work-life balance is one of the factors that directly affect the quality of both personal life and work, influencing nurses' overall well-being and job performance (1). However, nursing is known to be a profession where maintaining work-life balance is challenging due to high stress levels and the three-shift system. Nurses often face conflicts in a demanding and stressful environment while prioritizing the needs of patients (5). Especially, shift work and heavy workloads are major factors that lead to exhaustion after work and create an imbalance in home life, significantly reducing overall quality of life. According to the study by Alreshidi & Alsharari (1), only about 2/5 of nurses reported a high level of quality of life in terms of work-family balance. Shift work and heavy workloads were found to cause a lack of energy after work and create an imbalance in home life. The primary reasons nurses leave their profession are linked to the imbalance in work-life balance and a lack of job autonomy (3). Particularly, MZ generation nurses tend to place a strong emphasis on work-life balance. If their personal lives and values are not respected, or if tailored training and organizational culture that reflect their characteristics are not established, this could lead to social losses, such as higher turnover rates (2).

The MZ generation is reported to have clear personal standards when it comes to evaluating and forming attitudes toward specific issues, and they tend to act strongly based on these standards (8). Additionally, the MZ generation is highly sensitive to fairness, with their values shaped around their personal preferences (10, 11). They also exhibit a strong tendency to express their beliefs openly and confidently, displaying the characteristics of being outspoken 'speakers' (8). Therefore, research on the types of work-life balance perceptions among MZ generation nurses is essential for improving

collaboration and communication within organizations. It will also play a key role in developing more effective leadership styles and organizational cultures, ultimately helping to reduce turnover rates. As such, This study aims to identify the perception types of work-life balance among MZ generation nurses and explore individual support and organizational-level improvements to enhance their psychological well-being and overall job performance.

The Q methodology can be used as an effective tool to objectively and scientifically measure subjective and personal experiences. Existing studies on nurses' work-life balance have primarily focused on quantitative surveys based on theoretical hypotheses (1, 12, 13), which may lead to superficial results. Therefore, this study seeks to explore the perception types of work-life balance among MZ generation nurses more fundamentally through the use of Q methodology.

This study aims to identify the perception types of work-life balance among MZ generation nurses using the Q methodology. The research questions could focus on identifying the core dimensions of work-life balance perceptions among MZ generation nurses and exploring the factors that influence these perceptions.

### **Theoretical framework**

To construct a theoretical framework applying Self-Determination Theory (SDT) to the work-life balance of MZ generation nurses, we can focus on the core elements of SDT: autonomy, competence, and relatedness. When these three basic needs are fulfilled, individual motivation and well-being improve, which significantly influences work-life balance. Below is a guide to building this theoretical framework (13).

#### ***Autonomy***

Autonomy refers to the feeling of being able to regulate and control one's actions independently. In the workplace, autonomy is related to having decision-making power and managing time

independently (13). When MZ generation nurses experience autonomy in the workplace, such as through flexible scheduling or having responsibilities over certain tasks, they are likely to maintain a better work-life balance. For instance, if they have the option of flexible working hours or the ability to choose tasks, their job satisfaction and motivation can increase (13).

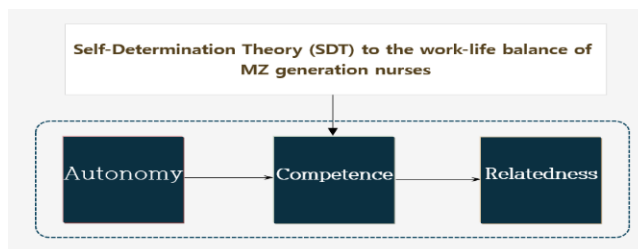
### **Competence**

Competence is the confidence in utilizing one's abilities to successfully tackle challenging tasks (13). When MZ generation nurses feel competent in their roles and sense that their skills are developing, work-related stress decreases, and their quality of life improves. Particularly, when their expertise is recognized and they are given opportunities for career development, they are better able to balance work and personal life (13).

### **Relatedness**

Relatedness refers to the feeling of meaningful connections with others and a sense of belonging in a social group (13). When MZ generation nurses build supportive and cooperative relationships with their colleagues, workplace stress is reduced, and their psychological well-being improves through social support. Additionally, when positive interpersonal relationships are formed at work, job satisfaction increases, and they are more likely to maintain better psychological balance in their personal lives (13).

If the three basic needs of SDT (autonomy, competence, and relatedness) are not fulfilled, this can lead to job stress and burnout. On the other hand, when these needs are met, motivation and job satisfaction increase, leading to a more positive work-life balance. MZ generation nurses, in particular, are likely to experience a healthier work-life balance through the fulfillment of these needs (13).



**Figure 1.** Theoretical framework

## **Methods**

### **Research design**

This study is a Q methodology research aimed at identifying the perception types of work-life balance among MZ generation nurses and examining the characteristics associated with each type. Q methodology follows structured steps to explore subjective perspectives, as outlined by Berry and Props:

**1) Issue identification and defining the Discourse Space:** The topic is selected, and a range of opinions is defined, forming the foundation for statement collection.

**2) Development of the concourse & selection of the Q sample:** A comprehensive collection of statements (concourse) is developed, reflecting diverse perspectives on

the issue. A manageable subset (Q sample) of 30-60 statements, representing key themes, is chosen for ranking by participants.

**3) Participant selection (P-set):** A diverse group of participants is selected to provide varied insights, ensuring all major perspectives are represented.

**4) Q Sorting** & Participants rank the Q sample based on criteria like agreement, revealing their subjective views.

**5) Application of findings (Q Sorting and factor analysis & interpretation of factors)** Data from the Q sorts are analyzed using principal component analysis (PCA) and rotation to identify shared perspectives. Each factor represents a distinct viewpoint, constructed by analyzing highly ranked statements. The results guide the development

of policies or interventions, informed by the diverse perspectives identified.

### **Research procedure**

#### ***1) Issue Identification and Defining the Discourse Space***

The Q population was selected through a literature review and individual in-depth interviews. The literature review was conducted using academic journals and dissertations provided by the Korea Education and Research Information Service (KERIS), CINAHL, and PubMed. Studies published after 2004 were examined without restricting the field to nursing, using search terms such as "MZ generation nurses' work-life balance perception," "work-life balance," and "MZ generation nurses," to extract relevant domestic and international prior research. In this process, 90 statements were developed by extracting content related to MZ generation nurses' perceptions of work-life balance from various sources, including content analysis on nurses' work-life balance perceptions (10), tasks of preceptors working with new nurses (13), and tools developed by Kim and Park(14) for measuring work-life balance. The individual in-depth interviews were conducted with MZ generation nurses from February 1 to February 25, 2024. A total of 10 participants took part in the interviews, selected through purposive and snowball sampling methods. The participants were MZ generation nurses working at two tertiary hospitals and one general hospital located in Seoul, Gangwon Province, and Gyeonggi Province. In the MZ generation, 'M' refers to Millennials, individuals born between the early 1980s and mid-1990s, while 'Z' refers to Generation Z, those born from the mid-1990s to 2005. Accordingly, the interviews were conducted with 10 MZ generation nurses. The interview questions were developed with the consultation of an expert panel consisting of two MZ generation nurses and two nursing professors. The interview questions included: 'What do you think about work-life balance as an MZ generation nurse?', 'What does work-life balance mean to you?',

'What do you think are the advantages of having a high work-life balance?', 'What do you think are the disadvantages of having a low work-life balance?', and 'Please share your thoughts on how MZ generation nurses perceive work-life balance.' Each in-depth interview lasted approximately 30 minutes to 1 hour per participant. With the participant's consent, the interview content was recorded and documented. Through the analysis of these in-depth interview materials, a total of 140 statements were extracted. From the statements extracted through the literature review and individual in-depth interviews, repetitive or similar statements were consolidated, resulting in a total of 190 statements being developed. A content classification table was used to select a systematic and comprehensive Q sample from the Q population. In addition, statements that were frequently mentioned and considered important but did not easily fit into the predefined categories were separately organized and included.

#### ***2) Development of the Q sample (Concourse)***

The Q sample was created through a process of integrating and organizing statements with similar meanings, thereby producing mutually exclusive statements. First, the statements in the Q population were categorized into four role categories. Each statement was then divided into agree, neutral, and disagree groups. Based on the number of statements included in the Q population, the process of balancing the composition ratio of the statements was carried out to form the Q sample. In fact, this process was repeated several times to integrate and simplify statements with similar or overlapping meanings. The final Q sample was designed with 8 neutral statements, fewer than those in the agree and disagree categories, which were equally balanced with 14 statements each. To achieve this, three rounds of consultation were conducted with the previously mentioned expert panel, resulting in the completion of the Q sample with 40 representative statements that clearly conveyed the intended meanings. After

creating the Q sample, a pilot study was conducted with three MZ generation nurses to check the sorting time, identify statements that took too long to categorize, and clarify any ambiguous statements. The statements were then revised within the scope of maintaining their original meaning. The reliability of the selected Q sample was tested by administering a test-retest to 10 MZ generation nurses at a one-week interval. The results showed a correlation coefficient of  $r = .85$ , indicating that the sample demonstrated sufficient reliability (15).

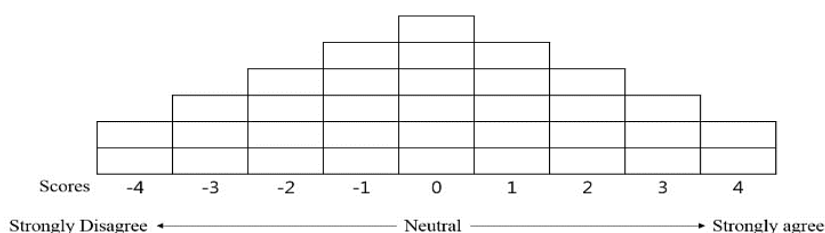
### **3) Selection of participants (P Set)**

The Q methodology allows for research with a relatively small number of participants, sufficient to generate and compare factors. In fact, having too many participants can lead to distorted results during factor analysis. Therefore, the Fisherian experimental design principles and the principle of small sample sizes are followed (15). The P sample consisted of 40 MZ generation nurses working at two tertiary hospitals and one general hospital located in Seoul, Gangwon Province, and Gyeonggi Province. These nurses participated after receiving an explanation of the study's purpose and content and providing written consent to participate. The selection of the P sample was carried out using convenience or snowball sampling, through introductions by the nursing department or other participants.

### **4) Application of findings (Q Sorting and factor analysis & interpretation of factors)**

The Q sorting was conducted from June 1 to June 31, 2024, following the principle of forced distribution in Q methodology, where the P sample sorted the 40 statements selected for the Q sample. The

Q sorting process took place during the participants' off-duty hours, either in a counseling room or in a location preferred by the participants. It was conducted in spaces that provided a clear view of the Q sample distribution chart and allowed ample room for sorting the statements. Before starting the Q sorting, the P sample was instructed to read all the Q sample statements to grasp the overall content. Any questions or uncertainties regarding the statements were addressed with additional explanations to ensure full understanding. In the next step, participants were asked to freely sort the statements in response to the question, "What do you think about work-life balance for MZ generation nurses?" They were instructed to place statements they agreed with on the right, those they disagreed with on the left, and neutral statements in the middle. After that, participants were instructed to place the statement they most agreed with from the agreed statements on the far right (+4) of the Q sample distribution chart, followed by the rest in descending order of agreement. Similarly, for the statements they disagreed with, they were asked to start from the far left (-4) and arrange them in order of strongest to least disagreement. Finally, the neutral statements were placed in the remaining spaces of the Q sample distribution chart, according to their level of agreement, neutrality, or disagreement. After the initial sorting of the Q sample, participants were given the opportunity to review the placement of the statements and make any adjustments to their sorting if desired. After the Q sorting process was completed, participants were asked to provide reasons for placing statements at the extremes (+4, -4) through an interview, with the reasons either written by the participants themselves or recorded (Figure 2).



**Figure 2.** A Q-sort table

### 5) Data analysis

The Q sorting data from the 40 participants in the P sample were scored, starting with 1 point for the statement they disagreed with the most. Then, a principal component analysis was conducted using the PQ Method Program. To obtain the most ideal results, various inputs were tested and compared using an Eigenvalue threshold of 1.0 or higher (15), and the classification deemed most optimal was selected. Each type was characterized by analyzing the standard scores of the included statements, the differences in standard scores between types, statements with higher or lower agreement compared to other types, participants' general characteristics, and interview content. The types were then named using terms that best represented their distinct characteristics.

In this study, factor analysis was employed to identify the distinct types of perceptions regarding work-life balance among MZ generation nurses. The Q-sorts from the participants were subjected to a by-person factor analysis, which is a fundamental step in Q methodology. This analysis seeks to uncover patterns of similarity in how participants sorted the Q statements, revealing shared viewpoints or perspectives on work-life balance.

□ **Correlation matrix and factor extraction:** A correlation matrix based on Q-sorts was used to identify clusters of participants with similar views on work-life balance. Principal component analysis (PCA) and the Kaiser-Guttman criterion helped determine the number of factors, followed by varimax rotation to improve interpretability.

□ **Factor interpretation:** Factors represented distinct viewpoints on work-life balance. Participants with high factor loadings (above  $\pm 0.40$ ) were key contributors to each factor, and their high-ranking statements were analyzed to construct narratives reflecting their perspectives.

□ **Factor loadings and significance:** Factors were assessed using variance explanation and participant loadings. Less significant factors were merged or discarded, revealing distinct perspectives such as autonomy, competence, and relational dynamics in work-life balance.

□ **Factor Types:** Factors were categorized based on common themes. Examples include "Autonomy Seekers" (emphasizing flexible schedules) and "Competence-Oriented Nurses" (focusing on skill development).

□ **Implications:** The analysis provided insights into the diverse perceptions of work-life balance among MZ generation nurses, offering guidance for creating policies and interventions to improve job satisfaction and retention.

### *Ethical considerations*

This study was conducted after receiving approval from the Daejin University Institutional Review Board (Approval No.: 1040656-202401-HR-01-11) regarding the study's purpose, methods, risks and benefits to participants, safety measures, and personal data protection plans. Prior to data collection, the purpose and scope of the study were explained to participants. They were informed that the collected data would only be used for research purposes, their identities would remain anonymous, and they retained the right to withdraw from the study at any point without consequence. Written informed consent was subsequently obtained, and participants were provided with a nominal honorarium as a token of appreciation for their participation.

### **Results**

#### *Formation of the Q-Types*

A Q-factor analysis on the subjectivity of MZ generation nurses' perceptions of work-life balance extracted four distinct types, collectively accounting for 54.1% of the total variance. Type 1

contributed 26.97%, followed by Type 2 with 15.38%, Type 3 with 7.00%, and Type 4 with 4.72%. The correlations among the four types are presented in Table 2, indicating the degree of similarity between

them. The correlation coefficients ranged from  $r = -.42$  to  $.19$ , suggesting a moderate level of correlation. This result implies that the types are relatively independent from one another (Table 1).

**Table 1.** Correlation Matrix between Types (N=40)

Variables	Type I	Type II	Type III	Type IV
Type I	1.00			
Type II	-.36	1.00		
Type III	-.19	.42	1.00	
Type IV	-.26	.36	.20	1.00

***Characteristics of the types***

The composition of the study participants showed that 7 belonged to Type 1, 6 to Type 2, 12 to Type 3, and 15 to Type 4. The demographic characteristics and factor weights of the participants belonging to each type are presented in Table 3. Within each type, participants with higher factor weights represent the most typical characteristics of that type, meaning they serve as representative examples of the corresponding group. To analyze the subjectivity of nurses' perceptions of work-life balance by type, the characteristics were interpreted based on statements showing strong agreement (Z score of +1 or higher) and strong disagreement (Z score of -1 or lower) out of a total of 40 statements. The characteristics of each type were presented by focusing on items where the standardized scores for a particular type showed a marked difference compared to the scores of other types. The types of nurses' perceptions of work-life balance identified based on the above analysis criteria are as follows (Table 2).

Based on the assertion that if a participant has a high factor loading in a certain factor, they represent the Q-factor, and special attention should be paid to their opinions, demographic information, etc., as they correspond to the Q-type classification (15), this study reflected these considerations in the classification of nurses' perceptions of work-life balance. Additionally, to determine the most optimal classification of types, analyses were conducted by specifying 2 to 6

factors. The results showed that the factor loadings were highest for each type when four factors were used, indicating that the most representative Q-types were derived from the four-factor model (Table 3,4).

***1) Type 1: Organization-Culture-Oriented***

Type 1 included 7 participants out of a total of 40, with 5 women and 2 men. The majority of participants were between the ages of 25 and 29, with work experience ranging from less than one year to 4-5 years. The participants worked in a variety of departments, including surgical wards, medical wards, intensive care units, and emergency rooms. All but one participant reported having an awareness of work-life balance.

The items that received the strongest agreement from participants in this type were, 'I believe that inappropriate leadership from my supervisor lowers work-life balance. (Z=2.02)' and 'I believe that working remotely improves work-life balance (Z=1.69)'. On the other hand, the items that Type 1 showed the strongest disagreement with were, 'I believe that a high level of work-life balance leads to better social well-being (Z= -1.94)' and 'I think work-life balance enhances the quality of life (Z= -1.94).'

Given these results, it appears that Type 1 views work-life balance for MZ generation nurses as being closely tied to factors such as satisfaction with the role of their supervisors and the nature of their work arrangements within the workplace. This

suggests that nurses in this type perceive work-life balance as originating from the organizational culture of their workplace, placing significant importance on workplace conditions. Given this subjectivity, these participants were categorized as the "Organization-Culture-Oriented" type.

### **2) Type 2: Personal-Goal-Oriented**

Type 2 included 6 participants out of a total of 40, all of whom were women. Their ages ranged from 20 to 24 years old and 25 to 29 years old. Work experience among Type 2 participants varied from less than one year to 4-5 years, and they worked in departments such as medical wards, surgical wards, and the emergency room. Similar to Type 1, 5 out of the 6 participants in this group indicated awareness of work-life balance, with only one exception.

The items that received the strongest agreement from Type 2 participants were: 'I believe that prioritizing goals and values enhances work-life balance ( $Z=1.86$ )' and 'I believe work-life balance is synonymous with happiness ( $Z=1.61$ ).' On the contrary, the items that Type 2 showed the strongest disagreement with were: 'I believe taking personal responsibility defines work-life balance ( $Z=-1.77$ )' and 'Work-life balance is important, but it is difficult to achieve in my field of work ( $Z=-1.76$ ).'

Based on the above observations, MZ generation nurses in Type 2 appear to prioritize personal goals and values, and they show a strong interest in happiness, in contrast to the organization-focused work-life balance seen in Type 1. This suggests that they value individual tendencies and personal elements, leading to the classification of this type as "Personal-Goal-Oriented."

### **3) Type 3: Organization-Culture-Dissatisfied**

Type 3 included 12 participants out of a total of 40, with 6 of them having 2-3 years of experience, making up the majority. Eight participants worked inwards, and 11 out of 12, with one exception, indicated that they were aware of work-life balance.

The items that Type 3 participants most strongly agreed with were: 'I think a lack of communication reduces work-life balance ( $Z=1.82$ )' and 'I believe that inappropriate leadership from my supervisor lowers work-life balance ( $Z=1.69$ ).' In contrast, Type 3 participants expressed the strongest disagreement with 'Work-life balance means the organization guarantees time for personal development ( $Z=-1.60$ )' and 'I believe that our organization's culture values work-life balance ( $Z=-1.59$ ).'

Based on the above findings, Type 3 stands in contrast to Type 1, which finds work-life balance in the positive aspects of organizational culture, and Type 2, which emphasizes a personal, self-centered approach to work-life balance. Instead, Type 3 perceives a lack of communication and inappropriate leadership as factors that lower work-life balance. Their disagreement with the idea that the organization guarantees personal development or values work-life balance reveals a more negative outlook. Therefore, this type was classified as "Organization-Culture-Dissatisfied," as it reflects dissatisfaction with the organization's work-life balance culture.

### **4) Type 4: Emotional-Stability-Oriented**

Type 4 included the largest group of participants, with 15 out of 40. This group showed a balanced distribution in terms of gender, age, work experience, and departments they worked in. A notable characteristic of this group was that 9 out of the 15 participants were working in medical or surgical wards.

The items that received the strongest agreement from Type 4 participants were: 'I believe that work-life balance means not thinking about work outside of scheduled working hours ( $Z=2.09$ )' and 'Work-life balance is important, but it is difficult to achieve in my field of work ( $Z=1.84$ ).' On the contrary, the items that Type 4 participants showed the strongest disagreement with were: 'I believe that unnecessary work burdens lower work-life balance ( $Z=-1.63$ )' and 'I think psychological support programs improve work-life balance ( $Z=-1.61$ ).'



## Work-life balance among MZ generation nurses

Analyzing the above results reveals that while the previous types focused on finding or expressing dissatisfaction with work-life balance through organizational or personal factors, Type 4 emphasizes the need for emotional stability. This is reflected in their belief that work-life balance means not thinking about work outside of working hours and their perception that achieving work-life balance is difficult in their field. This suggests that Type 4 participants view emotional stability as essential for maintaining work-life balance. This suggests that MZ generation nurses prioritize emotional stability and personal development over physical development or involvement in the organization when considering work-life balance. Therefore, the fourth type was named 'Emotional-Stability-Oriented.'

### 3. The items agreed or disagreed upon by every type

From the above results, it can be seen that the work-life balance types of MZ generation nurses are categorized into four distinct types, each showing clear characteristics corresponding to their respective types. However, there were statements that nurses corresponding to the four types commonly agreed or disagreed with regarding work-life balance, which are presented in Table 4. The statement that MZ generation nurses showed strong agreement with was, 'To me, work-life balance means having a fair salary' ( $Z=-0.18$ ). This suggests that for these nurses, aspects such as individual preferences, organizational culture, and physical and mental well-being are more influential in shaping their work-life balance than salary. As a result, salary is not seen as a key factor in determining their work-life balance.

**Table 2.** Demographic Characteristics and Factor Weight for P-sample (N=40)

Type	Var no.	Factor weight	Gender	Age	Years of Service	Department	Aware of Work-life Balance
Type I (n=7)	5	0.94	Male	25	1	Surgical Ward	No
	8	0.16	Male	24	1	ICU	Yes
	18	0.67	Female	25	3	Others	Yes
	25	0.94	Female	29	5	Surgical Ward	Yes
	27	0.54	Female	29	5	Others	Yes
	28	0.39	Female	28	3	ER	Yes
	38	0.67	Female	30	3	Medical Ward	Yes
Type II (n=6)	1	0.19	Female	24	1	Medical Ward	Yes
	11	0.60	Female	26	3	Surgical Ward	Yes
	15	0.29	Female	27	1	Medical Ward	Yes
	16	1.02	Female	28	3	ER	Yes
	22	0.17	Female	26	5	ER	No
	36	1.02	Female	29	4	Medical Ward	No
Type III (n=12)	4	0.79	Female	24	1	Medical Ward	Yes
	7	1.30	Male	24	1	ICU	Yes
	9	0.66	Female	28	3	ER	Yes
	10	0.22	Female	29	1	Medical Ward	Yes
	13	0.30	Male	25	1	Medical Ward	Yes
	20	1.05	Female	28	3	ER	Yes
	21	0.23	Female	26	3	ER	Yes
	23	0.43	Female	28	5	Surgical Ward	Yes
	24	0.37	Female	27	5	Surgical Ward	Yes
	29	0.66	Female	24	3	Surgical Ward	Yes
	33	0.30	Female	28	3	Medical Ward	Yes
40	1.05	Female	27	3	Surgical Ward	No	
Type IV (n=15)	2	0.18	Male	26	1	Medical Ward	No
	3	0.79	Female	26	1	Medical Ward	Yes
	6	0.49	Female	29	1	ICU	Yes
	12	1.92	Female	27	1	Surgical Ward	Yes
	14	1.34	Male	27	1	Medical Ward	Yes
	17	0.93	Female	29	1	ICU	Yes
	19	0.83	Female	26	5	Others	No
	26	0.49	Female	2	3	ER	Yes
	30	0.24	Female	27	3	Surgical Ward	Yes
	31	0.53	Female	28	5	Medical Ward	Yes
	32	1.92	Female	29	5	Surgical Ward	Yes
	34	0.27	Female	24	3	Medical Ward	Yes
	35	0.30	Female	28	3	Surgical Ward	No
	37	0.93	Female	27	5	Surgical Ward	Yes
	39	0.83	Female	27	3	Medical Ward	Yes

**Table 3.** Representative Q-samples and Z-scores in types (N=40)

Type	No.	Statement	Z-score
Type 1	n=7	I believe that inappropriate leadership from my supervisor lowers work-life balance.	2.02
		I believe that working remotely improves work-life balance.	1.69
		I think that having a good work-life balance improves physical health.	1.28
		I believe that work-life balance means not thinking about work outside of scheduled working hours.	1.19
		Valuing goals and values enhances work-life balance.	1.16
		I think that work-life balance is about securing personal time.	1.07
		I believe work-life balance is synonymous with happiness.	1.07
		I think work-life balance means flexible working hours.	-1.07
		I think work-life balance means having good vacation policies	-1.28
		I think work-life balance is a factor that strengthens team collaboration.	-1.32
		I think the absence of holidays lowers work-life balance.	-1.77
		I think work-life balance is about working with a manageable workload.	-1.82
		I think work-life balance enhances the quality of life.	-1.94
		I believe that a high level of work-life balance leads to better social well-being.	-1.94
Type 2	n=6	I believe that prioritizing goals and values enhances work-life balance.	1.86
		I believe work-life balance is synonymous with happiness.	1.61
		I think that having a good work-life balance improves physical health.	1.56
		I believe that inappropriate leadership from my supervisor lowers work-life balance.	1.39
		I think that work-life balance means having guaranteed time after work.	1.25
		I think work-life balance is about taking time to rest.	1.24
		I think that work-life balance is about securing personal time.	1.10
		I think that training programs that enhance professional skills can improve work-life balance.	1.04
		I believe that a high level of work-life balance leads to better social well-being.	-1.09
		I believe that our organization's culture values work-life balance.	-1.10
		I do not prefer workplaces with poor work-life balance.	-1.22
		I think work-life balance means having good vacation policies.	-1.23
		Valuing goals and values enhances work-life balance.	-1.55
		I think the absence of holidays lowers work-life balance.	-1.68
Work-life balance is important, but it is difficult to achieve in my field of work.	-1.76		
I believe taking personal responsibility defines work-life balance	-1.77		
Type 3	n=12	I think a lack of communication reduces work-life balance.	1.82
		I believe that inappropriate leadership from my supervisor lowers work-life balance.	1.69
		I think that having a good work-life balance improves physical health.	1.64
		I think that having a good work-life balance improves psychological well-being.	1.50
		I believe that working remotely improves work-life balance.	1.44
		I believe work-life balance is synonymous with happiness.	1.29
		I think that having a good work-life balance improves spiritual well-being.	1.24
		I think work-life balance is about having peace of mind.	-1.33
		I think the absence of holidays lowers work-life balance.	-1.41
		I think work-life balance means having good vacation policies.	-1.48
		Work-life balance is important but hard to achieve in my field.	-1.57
		I believe that our organization's culture values work-life balance.	-1.59
		Work-life balance means the organization guarantees time for personal development.	-1.60
		Type 4	n=15
Work-life balance is important but hard to achieve in my field.	1.84		
Work-life balance means the organization guarantees time for personal development.	1.75		
To me, work-life balance means that work does not encroach on my personal life.	1.48		
I think work-life balance is about having time flexibility.	1.32		

## Work-life balance among MZ generation nurses

Type	No.	Statement	Z-score
		I believe that inappropriate leadership from my supervisor lowers work-life balance.	1.30
		I think a lack of communication reduces work-life balance.	1.25
		I do not prefer workplaces with poor work-life balance.	1.02
		I believe that our organization's culture values work-life balance.	-1.09
		I think work-life balance is about having peace of mind.	-1.10
		I think unexpectedly long working hours reduce work-life balance.	-1.11
		I believe taking personal responsibility defines work-life balance.	-1.30
		To me, work-life balance means flexible working hours.	-1.52
		I think that training programs to manage work-related stress are needed.	-1.58
		I think psychological support programs improve work-life balance.	-1.61
		I believe that unnecessary work burdens lower work-life balance.	-1.63

**Table 4.** Q-Statements on Z-Scores according to Types (N=40)

Q-Statement	Z-Score			
	Type I (n=7)	Type II (n=6)	Type III (n=12)	Type IV (n=15)
Q1 I think work-life balance is about enhancing quality of life.	0.5	2.5	0.9	0.8
Q2 I think work-life balance is about having more free time.	2.1	2.2	0.4	1.2
Q3 I think work-life balance means working with a reasonable workload.	-0.2	1.9	1.9	1.6
Q4 I think work-life balance is about working in a good environment.	-0.3	1.3	0.6	-0.3
Q5 I think work-life balance is about having a reasonable salary.	0.3	1.1	0.3	-1.5
Q6 I think work-life balance is about enjoying hobbies.	1.7	1.4	-0.2	0.6
Q7 I think the lack of holidays lowers work-life balance.	0	0.8	0.8	0.1
Q8 I think working remotely increases work-life balance.	-0.7	0.9	1.5	-0.7
Q9 I believe work-life balance means not thinking about work outside of working hours.	0.2	0.7	1.4	2.1
Q10 I think work-life balance means flexible working hours.	-0.5	-0.2	0.6	-0.6
Q11 I believe work-life balance includes a vacation policy.	-0.6	0.4	1.3	-0.7
Q12 I think our organizational culture values work-life balance.	-0.3	0.5	1.1	0.5
Q13 I believe work-life balance is when the organization ensures time for personal development.	-1.7	0.2	0.3	-1.6
Q14 Work-life balance is important but hard to achieve in my field.	1.8	1.8	-0.3	0
Q15 I do not prefer a job with a poor work-life balance.	-0.9	-0.2	-1.8	-2.6
Q16 I think work-life balance strengthens teamwork.	2.4	0.6	1	0.6
Q17 Work-life balance is harmony between my career and daily life.	-1.6	0.9	-0.4	0.4
Q18 I think stress management programs related to work increase work-life balance.	0.5	0.8	-0.7	1
Q19 I believe psychological support programs enhance work-life balance.	-1.4	-0.1	-0.5	-1.9
Q20 I think programs to improve professional skills increase work-life balance.	0.6	-0.4	-0.5	0.3
Q21 Work-life balance is about spending quality time with family or friends.	-0.4	-0.3	-1.6	0.5
Q22 I think appropriate incentives and rewards are work-life balance.	-1.5	-0.6	-1.7	-1
Q23 I think unnecessary work burdens decrease work-life balance.	-1.6	-0.8	-1.7	-0.6
Q24 Inappropriate leadership lowers work-life balance.	0.8	-0.6	0.7	0
Q25 Lack of communication lowers work-life balance.	1.3	-0.5	0.9	0.4
Q26 Unexpectedly long work hours lower work-life balance.	-1.7	-1.2	-1	-0.8
Q27 I think work-life balance is about mental peace.	1.3	-1.7	1.3	0.5
Q28 I think work-life balance means taking rest.	-1.2	-1.4	0.2	0.1
Q29 Work-life balance means that work does not encroach upon my personal life.	-1.5	-0.9	-1.1	1.5
Q30 I think work-life balance is happiness.	0.2	-0.6	-1.6	1.3
Q31 Work-life balance is about having time off after work.	-1.2	-1.3	-1.1	0.6
Q32 Work-life balance means securing personal time.	0.7	-1.2	0	-0.2
Q33 High work-life balance improves physical health.	-0.8	-0.4	-0.4	-0.1
Q34 High work-life balance improves mental health.	1.9	-0.6	0.6	0.9
Q35 High work-life balance improves spiritual health.	0.1	-0.9	1.3	0.3
Q36 High work-life balance improves social health.	0.5	-0.5	0.1	0.6
Q37 Empathy with colleagues increases work-life balance.	-0.3	-1.1	-1.4	-0.9
Q38 Valuing goals and values enhances work-life balance.	0.5	-0.6	-0.8	0.3
Q39 A culture that embraces diversity and opinions enhances work-life balance.	0.4	-0.7	-0.9	-0.5
Q40 Taking responsibility for oneself increases work-life balance.	-0.5	0.4	-0.1	-1.7

**Table 5.** Consensus items and average Z-scores (N=35)

Q5	Q-statement	Z-scores
	To me, work-life balance means having a fair salary.	-0.18

## Discussion

This study aims to classify the perceptions of work-life balance (balance between work and life) among MZ generation nurses by using Q methodology and to analyze their personal experiences and viewpoints to identify correlations. The research results categorized the perceptions of work-life balance among MZ generation nurses into four types: 'Organization-Culture-Oriented,' 'Personal-Goal-Oriented,' 'Organization-Culture-Dissatisfied,' and 'Emotional-Stability-Oriented.' This paper analyzes the characteristics of each type and the differences between them, as well as commonalities among MZ generation nurses. It also aims to discuss the specific organizational responses for each type based on these characteristics. This study aims to classify the perceptions of work-life balance (balance between work and life) among MZ generation nurses by using Q methodology and to analyze their personal experiences and viewpoints to identify correlations. The research results categorized the perceptions of work-life balance among MZ generation nurses into four types: 'Organization-Culture-Oriented,' 'Personal-Goal-Oriented,' 'Organization-Culture-Dissatisfied,' and 'Emotional-Stability-Oriented.' This paper analyzes the characteristics of each type and the differences between them, as well as commonalities among MZ generation nurses. It also aims to discuss the specific organizational responses for each type based on these characteristics.

### 1. *Organization-Culture-Oriented (Type 1)*

First, nurses in the 1st type, 'Organization-Culture-Oriented,' tend to seek work-life balance in organizational factors such as relationships with supervisors, organizational culture, and work conditions. They perceive that factors such as leadership from supervisors and remote work have a significant impact on work-life balance, and believe that job satisfaction at the workplace, as well as the quality of communication and leadership within the organization, are important elements of work-life balance. Nurses of this type strongly agree with statements like 'inappropriate leadership from

supervisor lowers work-life balance.' and 'working remotely improves work-life balance,' and they respond sensitively to the organization's culture and structural conditions. Therefore, to improve the work-life balance of these nurses, the organization needs to provide smooth communication with supervisors, positive leadership, and a flexible working environment. This approach can enhance job satisfaction among nurses and ultimately improve their work-life balance. 'Organization-Culture-Oriented' nurses recognize the importance of organizational factors such as relationships with supervisors, leadership, and work conditions in affecting work-life balance. This suggests a need for improvements in organizational culture and structural conditions. Previous studies also align with the findings of this research (16-18). Based on these perceptions, organizations should ensure that supervisors support and respect employees' work-life balance through leadership training and development programs(19-20) as well as through effective policies(21-23). Additionally, expanding flexible work arrangements and remote work options is necessary to support nurses in effectively balancing work and life.

### 2. *Personal-Goal-Oriented (Type 2)*

Secondly, the 2nd type, 'Personal-Goal-Oriented,' is characterized by nurses who find work-life balance through the achievement of personal goals and values. They view the achievement of personal goals and the pursuit of happiness as important elements of work-life balance, focusing more on personal growth and accomplishment than on organizational factors. The characteristics of the 2nd type of nurses include recognizing work-life balance as a core element of achieving personal goals and values. They strongly agree with statements such as 'prioritizing goals and values enhances work-life balance' and 'work-life balance is synonymous with happiness' and they place a high importance on personal achievement and self-development. This aligns with the characteristics of the MZ generation, who value personal achievement and self-development. They tend to pursue work-life balance through personal growth and satisfaction rather than relying on opportunities within the workplace

(16). Strategies for the 2nd type of nurses should focus on creating an environment that supports personal growth and encourages self-development. Since this type of nurse values personal growth and goal achievement, it is important to provide various programs that support these aspects. To achieve this, it is necessary to offer educational and training programs for self-development, as well as mentoring and coaching programs for career advancement, to support nurses in reaching their career goals (24-25). Additionally, it is important to establish a performance-based reward system that acknowledges nurses' achievements, thereby enhancing their sense of accomplishment. Implementing performance-based rewards and incentives will help nurses realize their goals and feel a greater sense of achievement.

### **3. Organization-Culture-Dissatisfied (Type 3)**

The 3rd type, 'Organization-Culture-Dissatisfied,' consists of nurses who perceive that work-life balance is hindered by negative elements within the organization, such as a lack of communication or inadequate leadership. They strongly agree with the statement 'a lack of communication reduces work-life balance' while showing a negative response to the statement 'The organization's culture values work-life balance.' This response suggests that negative elements experienced within the organization have a significant impact on individuals' work-life balance. Additionally, they have a negative perception of the work-life balance assurances provided by the organization and express dissatisfaction with the organizational culture. This indicates that they are dissatisfied with the lack of communication and ineffective leadership within the organization and perceive these factors as major contributors to the hindrance of work-life balance. For this type of nurse, it is necessary to improve communication within the organization, strengthen fair and transparent leadership, and enhance the work environment (20). This approach can increase nurses' satisfaction with the organization and improve their work-life balance. As such, for the 3rd type of nurse, it is crucial to improve communication

within the organization and enhance the fairness and transparency of leadership. To address this, since lack of communication has been identified as a major issue, policies to strengthen communication within the organization are needed (25). For example, conducting regular feedback sessions or surveys to gather nurses' opinions and then developing improvement measures based on that feedback is crucial. Moreover, establishing formal procedures and channels to address grievances within the organization is essential to help nurses rebuild trust in the organization.

### **4. Emotional-Stability-Oriented (Type 4)**

Finally, the 4th type, 'Emotional-Stability-Oriented,' consists of nurses who seek work-life balance through emotional stability and separation from work. They focus on maintaining emotional stability by avoiding work-related thoughts outside of work hours and finding emotional balance even in environments where achieving work-life balance is challenging. The characteristics of the 4th type of nurses show a tendency to achieve work-life balance through strict separation from work and emotional stability. They believe that 'not thinking about work outside of scheduled work hours' is a crucial element of work-life balance and desire to enjoy their personal lives in a completely separated state during non-work hours. These characteristics suggest that the MZ generation wants to completely disconnect from work outside of working hours and places great value on mental health and emotional stability. In particular, the MZ generation does not live according to externally imposed standards. They prioritize their own values, seek self-satisfying happiness and success, put themselves first before work or the workplace, and prioritize their own life and happiness above all else (26-27). Consequently, to support this type of nurse, it is essential to provide programs that reduce mental stress and support emotional stability. Additionally, expanding opportunities for appropriate rest and rejuvenation is necessary to help nurses perform their duties in an emotionally stable state (28-29). This approach will enhance work-life balance. Providing

programs that reduce mental stress and support emotional stability is crucial (28-29).

### 5. *Common perceptions and implications*

According to the research findings, all types of nurses consider organizational culture, personal disposition, and physical and mental health status to be more important than salary in improving work-life balance. This indicates that MZ generation nurses tend to prioritize mental satisfaction and quality of life over financial compensation. This suggests that organizations have the potential to improve nurses' work-life balance by adopting a tailored approach that reflects their diverse needs and preferences. To enhance work-life balance for MZ generation nurses, it is essential to strengthen psychological and emotional support programs in addition to financial compensation and to strive to create a positive organizational culture. To build a positive organizational culture, it is necessary to establish team-building activities based on mutual respect and trust and to foster a feedback culture. This will help nurses feel valued and supported within the organization. This approach will enhance work-life balance by addressing the diverse needs and preferences of MZ generation nurses and, ultimately, foster a positive attitude towards the organization. This, in turn, will contribute to more effective engagement in their work and increased overall job satisfaction. This study classified the perceptions of work-life balance among MZ generation nurses into four distinct types and analyzed their respective characteristics.

The **Organizational Culture-Centered Type (Type 1)** believes that organizational factors—such as relationships with superiors, organizational culture, and work styles—have a significant impact on work-life balance, emphasizing the need for communication, leadership, and a flexible work environment. The **Individual Goal-Centered Type (Type 2)** values personal growth and achievement, considering an environment that fosters self-development and performance-based compensation as necessary for maintaining balance. The **Organizational Culture Dissatisfied Type (Type 3)** perceives that work-life balance is hindered by negative

organizational factors, especially due to the lack of communication and leadership issues, which they believe must be improved. Lastly, the **Emotional Stability Type (Type 4)** prioritizes emotional stability and the clear separation of work from personal time, calling for mental stress reduction and stability support programs. The study highlights that MZ generation nurses tend to value organizational culture and mental well-being over economic compensation, suggesting that a tailored approach could enhance their work-life balance. However, the research is limited by its sample size and geographic scope, indicating the need for further studies in diverse cultural contexts to validate these findings.

To enhance work-life balance for MZ generation nurses, organizations should implement several key strategies. First, they can improve communication and leadership by establishing open channels for regular feedback and transparent interactions between staff and management. Leadership development programs that focus on emotional intelligence and participatory decision-making will also foster a collaborative and respectful workplace culture. Second, organizations should foster personal development and achievement by providing opportunities for continuous learning, such as workshops, certifications, and tuition reimbursement, along with a performance-based reward system that recognizes individual contributions. Lastly, supporting emotional well-being through mental health initiatives, stress management workshops, and flexible work arrangements is essential. Creating spaces for relaxation and mindfulness can help reduce burnout and enhance emotional stability. By focusing on these areas—communication, leadership, personal growth, and emotional support—organizations can create a more supportive environment for MZ generation nurses, leading to improved retention and job satisfaction. Additionally, personalized work-life balance solutions tailored to employee feedback can further enhance organizational support to meet individual needs. Nursing managers have increasingly recognized the nursing shortage and the need for better work-life balance for MZ generation nurses as professional issues. Solutions are needed to

address this issue improve the work-life balance of MZ generation nurses and provide higher quality healthcare services (30-31).

## **Conclusion**

This study analyzes the various perceptions of work-life balance among MZ generation nurses and proposes tailored strategies that reflect their needs and preferences. This will enable hospital administrators to develop practical measures to enhance nurses' work-life balance, as well as improve job satisfaction and work retention. The research findings indicate that hospital administrators need to adopt various strategies to improve nurses' work-life balance. Specifically, since MZ generation nurses prioritize mental satisfaction and quality of life over financial compensation, organizations can enhance job satisfaction and organizational commitment by providing multidimensional support that reflects their diverse needs. This is expected to help reduce nurse turnover rates and strengthen the organization's stability.

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