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Original Article

# Medication Adherence and Illness Perception in Patients with Rheumatoid Arthritis: The Mediating Effect of Self-Efficacy

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# Equal contribution

**Abstract**

**Objectives**: To explore the mediating effect of self-efficacy (SE) on the relationship between medication adherence (MA) and illness perception (IP) in patients with rheumatoid arthritis (RA). **Methods**: A convenient sampling method was used to select 238 RA patients undergoing treatment at two hospitals in Guangzhou, China. A cross-sectional survey was conducted, utilizing a general information questionnaire, a chronic disease SE scale, an IP scale, and the Medication Adherence Rating Scale (MARS-A). R software (Version 4.2.2) was used to construct a mediation model to examine the impact of SE and IP on MA among RA patients. The bootstrap method was employed to validate the mediating role of SE. **Results**: The average scores for IP, SE, and MA were 120.50 ± 12.32, 29.36 ± 8.49, and 21.22 ± 2.96, respectively. Pearson correlation analysis revealed that SE was positively correlated with IP ($r = 0.23$, $p < 0.01$) and MA ($r = 0.195$, $p < 0.001$). IP was also positively correlated with MA ($r = 0.532$, $p < 0.05$). The mediating effect of SE in the relationship between IP and MA was confirmed. **Conclusion**: SE partially mediates the relationship between IP and MA in patients with RA.

**Keywords:** Illness Perception, Medication Adherence, Mediating Effect, Self-Efficacy, Rheumatoid Arthritis

## Introduction

Rheumatoid arthritis (RA) is a common autoimmune disease characterized by systemic inflammation, severe joint pain, and swelling, and is a major cause of disability and mortality[1,2]. The global prevalence of RA is estimated to range from 0.46% to 0.51%[3,4], with the age-standardized prevalence rate in China being 0.88%[5]. Furthermore, as life expectancy continues to rise worldwide, the number of RA patients is also increasing[6]. Although the exact etiology of RA remains unclear, it is marked by inflammatory changes in the synovial tissue, cartilage, and bone[1,7]. Chronic inflammation can also affect extra-articular organs, including the heart, kidneys, lungs, digestive system, eyes, skin, and nervous system, significantly impairing patients' physical function and quality of life[8].

Currently, there is no cure for RA, and guidelines recommend initiating disease-modifying antirheumatic drug (DMARD) therapy as soon as RA is diagnosed[9,10]. Early diagnosis and timely treatment can reduce joint damage progression in up to 90% of patients and prevent RA-related disabilities[11]. However, medication adherence (MA) among RA patients is suboptimal, with studies showing that more than 50% exhibit low adherence[12-14]. MA refers to

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the extent to which patients follow prescribed medication intervals and dosage regimens[15]. Low adherence is associated with higher disease activity[16], potentially leading to treatment failure, delayed recovery, and accelerated disease progression[17,18]. Therefore, MA is crucial for patients with RA. MA in RA patients is influenced by various factors[19]. According to the Common Sense Model of Self-Regulation (CSM) by Leventhal, individuals' perception of their illness is closely linked to MA[20]. Previous studies in populations such as stroke and type 2 diabetes patients have confirmed the association between Illness Perception (IP) and MA[21,22]. However, research on this relationship in RA patients is limited.

Moreover, numerous studies have consistently shown the direct impact of self-efficacy (SE) on MA[23-25], and a correlation between SE and IP (IP) has been established[21,26]. Bandura's self-efficacy theory posits that self-efficacy plays a critical role in regulating cognition and coping strategies[27]. In other words, SE may mediate the relationship between IP and MA. However, this relationship has not yet been confirmed specifically in RA patients.

Therefore, this study aimed to investigate whether SE mediates the relationship between IP and MA in RA patients. The findings will provide data for developing strategies to enhance MA in individuals with RA.

## Material and methods

### *Study Design and Participants*

This study employed a descriptive, cross-sectional design. Patients with RA undergoing treatment at the Third and Sixth Affiliated Hospitals of Sun Yat-sen University from June 1, 2021, to May 31, 2022, were selected as participants.

The inclusion criteria were as follows: (1) meeting the classification criteria for RA established by the American College of Rheumatology (ACR) in 1987; (2) aged 18 or older; (3) conscious with sufficient reading and verbal expression abilities for effective communication; and (4) willing to voluntarily participate. Exclusion criteria included individuals with severe damage to vital organs such as the heart, brain, or kidneys.

According to Breckler et al.[28], a sample size of at least 200 cases is required for reliable mediation analysis results. Therefore, a total of 240 questionnaires were collected for this study.

### *Procedure for Data Collection*

The researcher explained the purpose and content of the study to eligible RA patients, obtained their consent, and distributed the necessary questionnaires. Standardized instructions were provided to assist patients in completing the questionnaires, and the researcher addressed any questions or concerns during the process. Once completed, the questionnaires were collected on-site and reviewed for completeness and accuracy. Any omissions, incorrect entries, or logical errors were addressed by contacting participants for clarification, ensuring data integrity and reliability.

### *Survey Instruments*

The questionnaire used in this study included a self-designed general information questionnaire (covering sociodemographic and disease-related data), a MA scale, a chronic disease self-efficacy scale, and an IP scale.

### *Medication Adherence Rating Scale (MARS)*

MARS consists of five statements, each describing an attitude or behavior related to medication use in the past week. Responses are rated on a 5-point Likert scale: never (1), rarely (2), sometimes (3), often (4), and always (5), corresponding to a 1-5 scale. The overall score ranges from 5 (low adherence) to 25 (high adherence). MA was categorized into compliance (MARS ≥ 23) and non-compliance (MARS < 23), with the proportion of non-compliant patients reported[29].

### *Self-Efficacy*

We used the Chronic Disease Self-Efficacy Scale developed by Professor Lorig et al.[30] from Stanford University. The scale consists of two dimensions: symptom management self-efficacy and disease-specific management self-efficacy. It includes 6 items, each rated on a 10-point Likert scale, where 1 indicates "no confidence at all" and 10 indicates "completely confident." The average score of all items represents the total score, which ranges from 1 to 10, with higher scores reflecting higher levels of self-efficacy. Based on the total score, self-efficacy is categorized into three levels: low (score < 4), moderate (score 4-7), and high (score > 7). Previous research has shown that the Cronbach's α coefficient for this scale was 0.86[31]. In this study, the Cronbach's α was 0.935.

### *Illness Perception*

The Revised Illness Perception Questionnaire (IPQ-R), developed by Moss-Morris et al.[32], was used in this study. It consists of three sections: symptom identification, cognitive evaluation of illness by the patient, and causal attributions. For this study, we used the second section, which includes 7 dimensions and 38 items: timeline-acute/chronic, consequences, personal control, treatment control, illness coherence, timeline cyclical, and emotional representations. Scores for this section range from 38 to 190, with each item rated on a 5-point Likert scale from 1 ("completely disagree") to 5 ("completely agree"). Ten items (1, 4, 8, 15, 17, 18, 19, 23, 28, and 36) are reverse-scored. Higher scores in all dimensions, except for personal control and treatment control, indicate more negative IPs. The IPQ-R has been translated into multiple languages and used in various chronic disease studies, with Cronbach's α coefficients ranging from 0.7 to 0.81[33,34]. In this study, the Cronbach's α was 0.770.

## Statistical Analysis

The collected data were imported into R software (Version 4.2.2) for statistical analysis, using a significance level of P-value less than 0.05. For continuous data that followed a normal distribution, the distribution was described using the mean ± standard deviation. For non-normally distributed data, the median and interquartile range were used. Categorical data were described using frequency and proportion. To analyze the statistical differences in MA based on general and disease-related data, independent sample t-tests and ANOVA were performed. The Pearson correlation coefficient was calculated to examine the relationships between MA, IP, and self-efficacy. A structural equation model based on Bandura's self-efficacy theory was constructed, with IP as the independent variable, self-efficacy as the mediator, and MA as the dependent variable. Path coefficients were estimated using the 'sam' command in the 'lavaan' package, and the Bootstrap method (n = 1000) was employed to estimate the confidence interval of the mediating effect[35]. The direct effect of IP on MA and the indirect effect mediated by self-efficacy were analyzed by examining the magnitude and significance of the path coefficients and mediating effects in the model.

## Results

*Demographic Characteristics*

A total of 241 eligible patients agreed to participate in the study and received the relevant questionnaires. Three participants, however, declined to complete the questionnaires midway. Ultimately, 238 individuals completed the survey and were included in the analysis, yielding a response rate of 98.76%.

The results showed that the average duration of RA among the patients was 7.58 ± 7.12 years. The majority of respondents were female (85.3%). Most participants did not have any chronic diseases (76.9%) and reported experiencing joint pain symptoms (65.1%) (Table 1).

**Table 1.** Demographic characteristics of the participants (n = 238).

| | Number of Case | Percentage (%) |
|---|---|---|
| **Sex** | | |
| Male | 35 | 14.7 |
| Female | 203 | 85.3 |
| **Age (year)** | | |
| < 40 | 60 | 25.2 |
| 40-65 | 134 | 56.3 |
| ≥ 65 | 44 | 18.5 |
| **Duration of rheumatoid arthritis (years)** | 7.58 ± 7.12 | |
| **Chronic comorbidity** | | |
| No | 183 | 76.9 |
| Yes | 55 | 23.1 |
| **Rheumatoid arthritis symptoms** | | |
| Asymptomatic patients | 34 | 14.3 |
| Symptomatic patients | 204 | 85.7 |
| **Symptoms** | | |
| Joint pain | 155 | 65.1 |
| Joint swelling | 131 | 55.0 |
| Morning stiffness | 60 | 25.2 |
| Joint deformity | 48 | 20.2 |
| Difficulty in movement | 38 | 16.0 |

*Notes: n (%); Mean ± SD.*

Univariate analysis of MA, SE and IP in Patients with RA

The results of the univariate analysis (Table 2) showed that age had a statistically significant impact on the total score of IP (t = 3.16, P < 0.05), with patients aged 65 and above exhibiting higher scores in IP. Regarding rheumatoid arthritis-related symptoms, patients with symptoms had higher levels of IP compared to those without symptoms (t = 9.73, P < 0.001). Additionally, patients experiencing joint swelling (t = 10.6, P < 0.001), morning stiffness (t = 5.41, P < 0.02), and difficulty in movement (t = 12.0, P < 0.001) demonstrated higher levels of IP. Patients with joint swelling (t = 11.3, P < 0.001) and morning stiffness (t = 10.1, P < 0.001) also reported higher levels of SE. Furthermore, patients with symptoms of joint swelling (t = 2.034, P = 0.043), morning stiffness (t = 2.325, P = 0.021), and RA (t = -2.023, P = 0.044) showed higher MA (Table 2).

*Correlations Between IP, SE and MA*

The results of this study showed that the average scores for IP, SE, and MA were 120.50 ± 12.32, 29.36 ± 8.49, and 21.22 ± 2.96, respectively. Pearson correlation analysis revealed a positive correlation between SE and IP (r = 0.23, p < 0.01), as well as between SE and MA (r = 0.195, p < 0.01). A positive correlation was also found between IP and MA (r = 0.532, p < 0.01) (Table 3).

*Mediating Effects of SE Between IP and MA*

A three-step approach was used to conduct the mediation analysis and examine the mediating effect. The first step analyzed the effect of IP on SE, revealing a significant influence (β = 0.170, p < 0.0001). The second step examined the relationship between IP and MA, which also showed a significant association (β = 0.108, p < 0.0001). The third step assessed the impact of IP on MA, with SE considered as a mediator. A statistically significant mediating effect was observed (β = 0.206, p < 0.0001), along with a significant direct effect of IP on MA (β = 0.313, p < 0.0001). These results suggest that SE partially mediates the relationship between IP and MA (Table 4).

**Table 2.** Univariate analysis of Medication Adherence (MA), Self-Efficacy (SE) and Illness Perception (IP) in Patients with RA (n = 238).

| | IP | | | SE | | | MA | | |
|---|---|---|---|---|---|---|---|---|---|
| | Mean ± SD | *F/t* | P | Mean ± SD | *F/t* | P | Mean ± SD | *F/t* | P |
| **Sex** | | 2.82 | 0.09 | | 1.81 | 0.18 | | 1.407 | 0.161 |
| Male | 123.71±12.46 | | | 31.14±8.09 | | | 21.8±4.47 | | |
| Female | 119.94±12.25 | | | 29.05±8.54 | | | 21.12±3.01 | | |
| **Age** | | 3.16 | 0.04* | | 0.39 | 0.68 | | 1.879 | 0.155 |
| < 40 | 120.23±11.26 | | | 30.12±8.83 | | | 21.28±3.71 | | |
| 40-65 | 119.27±12.73 | | | 28.96±8.64 | | | 20.99±3.19 | | |
| ≥65 | 124.59±11.85 | | | 29.55±7.60 | | | 21.86±4.22 | | |
| **Chronic comorbidity** | | 0.45 | 0.5 | | 0.02 | 0.88 | | 0.510 | 0.610 |
| Yes | 121.47±12.56 | | | 29.51±8.32 | | | 21.38±3.91 | | |
| No | 120.20±12.27 | | | 29.32±8.56 | | | 20.17±3.04 | | |
| **Joint pain** | | 2.8 | 0.1 | | 1.69 | 0.2 | | 1.632 | 0.104 |
| Yes | 121.47±12.74 | | | 29.88±8.41 | | | 21.43±3.08 | | |
| No | 118.67±11.36 | | | 28.39±8.60 | | | 20.84±3.54 | | |
| **Joint swelling** | | 10.6 | < 0.001*** | | 11.3 | <0.001*** | | 2.034 | 0.043* |
| Yes | 122.80±11.95 | | | 31.00±7.68 | | | 21.53±3.16 | | |
| No | 117.67±12.24 | | | 27.36±9.02 | | | 20.84±3.35 | | |
| **Morning stiffness** | | 5.41 | 0.02* | | 10.1 | <0.001*** | | 2.325 | 0.021* |
| Yes | 123.67±13.35 | | | 32.32±7.54 | | | 21.9±3.97 | | |
| No | 119.43±11.81 | | | 28.37±8.58 | | | 20.99±2.97 | | |
| **Joint deformity** | | 2.76 | 0.1. | | 2.49 | 0.12 | | 1.620 | 0.107 |
| Yes | 123.12±11.07 | | | 31.08±7.48 | | | 21.77±4.08 | | |
| No | 119.83±12.56 | | | 28.93±8.69 | | | 21.08±3.02 | | |
| **Difficulty in movement** | | 12 | < 0.001*** | | 0.28 | 0.6 | | 1.383 | 0.168 |
| Yes | 126.71±13.06 | | | 30.03±7.87 | | | 21.76±4.66 | | |
| No | 119.31±11.85 | | | 29.23±8.61 | | | 21.12±2.92 | | |
| **Rheumatoid arthritis symptoms** | | 9.73 | < 0.001*** | | 2.43 | 0.12 | | -2.023 | 0.044* |
| Asymptomatic patients | 114.50±10.79 | | | 27.26±9.93 | | | 20.38±4.30 | | |
| Symptomatic patients | 121.50±12.30 | | | 29.71±8.20 | | | 21.36±3.01 | | |

*Notes: * p<0.05; ** p<0.01; *** p<0.001.*

## Discussion

*Current status of MA, SE, and IP in patients with RA*

Previous studies have reported suboptimal medication adherence (MA) in patients with rheumatoid arthritis (RA)[13,14,36,37]. In this study, the average MA score among RA patients was 19.25±2.79, which is higher than the findings of Mohamadzadeh et al.[37] (5.528 ± 1.79). A total of 203 (85%) patients were non-compliant with their medication, while 35 (15%) adhered to the prescribed regimen (Supplementary Table 1), indicating a generally low adherence level. This underscores the seriousness of the issue. One possible explanation for the low adherence could be the long duration of the disease, which may affect patients' medication habits. Neycheva et al. found that MA in RA patients tends to decrease over time, with adherence rates of 89.7% in the first year, 76% in the second year, and 64% in the third year[38]. As the disease progresses, patients may forget to take their

**Table 3.** The Correlations Between Medication Adherence (MA), Self-Efficacy (SE) and Illness Perception (IP).

| Variable | Mean | SD | SE r | MA r |
|---|---|---|---|---|
| Total IP | 120.50 | 12.32 | 0.23** | 0.532** |
| Timeline | 18.79 | 3.40 | 0.15* | 0.457** |
| Consequences | 19.21 | 3.75 | 0.18** | 0.341** |
| Personal control | 19.64 | 2.72 | 0.21** | 0.439** |
| Treatment control | 17.50 | 2.62 | 0.30** | 0.222** |
| Illness coherence | 14.36 | 3.45 | -0.03 | 0.131* |
| Timeline cyclical | 12.19 | 3.22 | 0.17 | 0.226** |
| Emotional representations | 18.80 | 4.23 | -0.01 | 0.182** |
| SE | 29.36 | 8.49 | - | 0.195** |
| MA | 21.22 | 2.96 | 0.195** | - |

*Notes: * p<0.05; ** p<0.01; *** p<0.001.*

**Table 4.** Mediating Effects of Self-Efficacy (SE) Between Illness Perception (IP) and Medication Adherence (MA).

| | Pathway | β | SE | Z | p | Bootstrap 95%CI |
|---|---|---|---|---|---|---|
| Path a | IP→SE | 0.170 | 0.042 | 4.004 | 0.000 | 0.101-0.243 |
| Path b | SE→MA | 0.036 | 0.018 | 2.021 | 0.043 | 0.005-0.067 |
| Path c'/direct effect | IP→MA | 0.108 | 0.012 | 8.936 | 0.000 | 0.080-0.134 |
| Path ab/indirect effect | IP→SE→MA | 0.206 | 0.039 | 5.043 | 0.000 | 0.131-0.284 |
| Path total | IP→MA | 0.313 | 0.041 | 9.263 | 0.000 | 0.235-0.397 |

*Notes: The proportion of the mediating effect is calculated as the indirect effect divided by the sum of the indirect effect and the direct effect, multiplied by 100%.*

medication due to busy schedules, and the lack of noticeable symptoms or disease stability may lead to a misunderstanding or underestimation of the importance of medication, resulting in reduced or discontinued use. However, in this study, the duration of the disease did not show a statistically significant association with MA, which is consistent with previous findings[39]. This may be attributed to the dynamic nature of MA in RA patients, which may not be captured by cross-sectional studies. Moreover, sociodemographic factors such as sex and age did not significantly influence MA in this study, which aligns with prior research[12,39]. This suggests that psychological variables may have a more substantial impact on MA in RA patients than sociodemographic factors.

IP refers to patients' cognitive evaluation and personal understanding of their medical condition and its potential consequences[20]. In this study, the IP score of RA patients was 120.50 ± 12.32, which aligns with the findings of Alharbi et al.[40] in dialysis patients (average score of 124.6) and Tu et al.[41] in epilepsy patients (average score of 121.01).

The SE score in this study was 29.36 ± 8.49, indicating a moderate to low level according to the Chronic Disease Self-Efficacy Scale. This score is lower than the results reported by McCulley et al.[42] in RA patients. One possible explanation for this discrepancy could be that RA patients often face complications such as joint swelling and morning stiffness, which limit their physical functioning and daily activities. These challenges can affect their overall quality of life and reduce their confidence in their ability to manage the disease and perform daily tasks[43].

*The impact of IP and SE on MA in patients with RA*

The relationship between IP and MA has been extensively studied in various chronic diseases, such as ankylosing spondylitis[44], type 2 diabetes[45], and epilepsy[46]. However, there is relatively limited research on this relationship in patients with rheumatoid arthritis (RA). The results of this study showed a positive correlation between IP and MA in RA patients ($r = 0.532$; $p < 0.01$). This suggests that patients with a better understanding of their disease are more likely to adhere to their prescribed medication regimen. One plausible explanation for this observation is that patients with a clear perception of their disease are more aware of its

impact on their overall health and daily life. They recognize the importance of medication in managing their condition and are motivated to take appropriate action. Healthcare professionals can play a vital role in improving MA by providing patients with comprehensive information about RA, including its causes, symptoms, diagnosis, treatment options, and prognosis. This approach may help patients develop a better understanding of RA, establish a solid IP, and enhance their MA.

Moreover, the results of this study also revealed a positive correlation between SE and MA in patients with RA ($r = 0.195$; $p < 0.001$), which is consistent with previous research[19,23]. Higher levels of SE in patients are associated with stronger beliefs in medication treatment, a more positive attitude towards medication, and greater confidence in disease management and control over their future lives[25]. This could be attributed to the fact that patients with high levels of SE may feel more confident in facing the challenges posed by their illness and believe in their ability to effectively manage their disease, leading to an improved quality of life. Their confidence and belief in their ability to manage the disease may serve as motivation for active engagement in disease management activities and adherence to the prescribed treatment regimen. These findings suggest that healthcare professionals should encourage the proactive involvement of RA patients, provide timely positive feedback and recognition, and enhance their confidence and SE in disease management. By doing so, healthcare professionals can promote active coping with the disease, improve MA, and ultimately enhance the overall quality of life for these patients.

### *SE in patients with RA partially mediates the relationship between IP and MA*

Our findings indicated that SE partially mediates the relationship between IP and MA in patients with RA. This suggests that IP can indirectly influence MA by altering patients' SE. Previous research has demonstrated that IP plays a significant predictive role in MA for various chronic diseases[44-46]. However, limited research has explored the correlation between IP and MA specifically in RA patients, and the underlying mechanisms remain unclear. The results of this study illuminate the pathway through which IP affects MA. On one hand, IP directly influences patients' MA. On the other hand, IP can also indirectly impact MA by influencing patients' SE.

Bandura's theory of SE suggests that SE is a cognitive process through which individuals assess their ability to perform specific tasks[27]. When individuals believe in their capability to accomplish a task, their confidence and belief in their abilities are strengthened, resulting in higher levels of SE. This, in turn, leads to increased effort and a greater likelihood of achieving their goals. Conversely, individuals with low SE may lack confidence in their abilities, which makes them more likely to give up on tasks or goals. This can negatively affect their confidence in managing their disease, resulting in a negative attitude and decreased engagement in health-promoting behaviors. For RA patients who have a positive perception of their illness, a clearer understanding of their health condition and its impact is evident. They believe that, through their own efforts, they can exert control over the disease, which enhances their SE. This confidence in their ability to manage the disease may contribute to their adherence to medication as a crucial aspect of disease management.

These findings suggest that healthcare professionals should first assess patients' perceptions of their illness, including each dimension of their perception, when providing medication guidance to RA patients. For those with a poor IP, it is essential to help them develop a more accurate understanding of RA. This approach can enhance their IP, subsequently increasing their levels of SE. As a result, MA may improve, leading to better prognosis and an enhanced quality of life.

One limitation of this study is that it only included patients with RA from two hospitals in Guangzhou, which may limit the generalizability of the findings due to cultural and regional constraints. The sample primarily consisted of patients from Guangdong province, so the results may not be applicable to a broader population. Additionally, the study's cross-sectional design lacks longitudinal tracking, making it difficult to capture the dynamic impact of IP on MA in RA patients. To address these limitations, future research should involve stratified sampling from multiple regions, centers, and hospitals of varying levels to improve the representativeness of the findings. Longitudinal studies should also be conducted to assess the stability of IP and SE in RA patients over time.

## Conclusion

This study, grounded in Bandura's theory of SE, examines the mediating role of SE in the relationship between IP and MA in patients with RA. The results indicate that IP can indirectly impact MA by influencing SE. Based on these findings, healthcare providers, particularly nurses, should first educate patients on effective disease management techniques. This education can boost patients' confidence in their ability to control their condition, thereby improving their SE and fostering greater MA.

*Ethics approval*

*The study was conducted in accordance with the principles of the Helsinki Declaration and was approved by the Medical Ethics Committee of the Third Affiliated Hospital of Sun Yat-sen University (approval number: RG2023-016-01) prior to its initiation.*

*Consent to participate*

*Informed consent was obtained from all participants included in the study.*

*Authors' contributions*

*Lei Huang and Yang Zhou designed the study. Yan Liu collected the data and performed the data analyses. Xiaohong Deng and Peijun*

*Xu contributed to drafting the manuscript. All authors have read and approved the final version of the manuscript.*

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**Supplementary Table 1.** Medication compliance rating scale for patients with RA, assessed through five questions. Patients select the frequency that best reflects their experience.

| Question | Always | Often | Occasionally | Rarely | Never |
|---|---|---|---|---|---|
| (1) I forget to take my medication | 60(25.21) | 108(45.38) | 40(16.81) | 22(9.24) | 8(3.36) |
| (2) Do you stop taking your medication when you feel better? | 83(34.87) | 90(37.82) | 32(13.45) | 22(9.24) | 11(4.62) |
| (3) I only take my medication when I am feeling ill | 85(35.71) | 81(34.03) | 35(14.71) | 23(9.66) | 14(5.88) |
| (4) Do you stop taking your medication if you feel worse after taking it? | 81(34.03) | 86(36.13) | 32(13.45) | 29(12.18) | 10(4.20) |
| (5) I take my medication less frequently than prescribed by my doctor | 80(33.61) | 100(42.02) | 27(11.34) | 23(9.66) | 8(3.36) |