

## EVALUATION OF QUALITY OF LIFE IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE USING THE SF-36 QUESTIONNAIRE

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### Abstracts

**The Relevance of Research.** Chronic obstructive pulmonary disease today is one of the leading places in the structure of morbidity of the adult working-age population of Ukraine. The severity of the problem adds economic losses on a national scale, which are due to the cost of treatment and a significant deterioration in the quality of life of such persons. The need to improve the effectiveness of restorative treatment of such patients requires the selection of fast and informative methods for diagnosing their functional state. **Objective and Methods** – set the level of the quality of life of patients with COPD using the SF-36 questionnaire. The research method is a using the SF-36 questionnaire, which provides for the application of 8 blocks of questions to determine the level of quality of life of patients with COPD. **The Results and Key Findings.** 25 men aged 56–64 years with COPD were examined. To compare the results obtained, 17 practically healthy men of the same age were additionally examined. Conducting a survey to determine the effect of physical activity on the quality of life of patients with COPD has shown, that the mean value of scores in their scores was significantly less for such in healthy patients and gives grounds to state about the significant effect of the presence of the disease on their motor state.

Evaluation of responses concerning the role of physical problems in limiting their ability to live shows, that men with COPD do not consider the presence of the disease the reason that prevents them from doing their daily work.

As a conclusion, we have a certain inconsistency in relation to males with COPD to the content of their illness and its impact on their quality of life. The received results testify to necessity of inclusion in the rehabilitation program of such patients of the factors, which would allow them to realize the content of the disease and its effect on the body. One of these factors we consider psychological rehabilitation.

**Key words:** quality of life, lung disease, survey.

**Роксолана Горбата. Оцінка якості життя хворих із хронічним обструктивним захворюванням легень із застосуванням опитувальника SF-36. Актуальність теми дослідження.** Хронічне обструктивне захворювання легень сьогодні займає одне з перших місць у структурі захворюваності дорослого працездатного населення України. Гостроти проблеми додають економічні втрати в загальнодержавному масштабі, які зумовлені вартістю лікування та значним погіршенням якості життя таких осіб. Необхідність підвищення ефективності відновного лікування таких пацієнтів вимагає добору швидких й інформативних методів діагностики їхньої функціонального стану. **Мета й методи дослідження** – установити рівень якості життя пацієнтів із ХОЗЛ, застосовуючи опитувальник SF-36. **Метод дослідження** – анкетування за допомогою опитувальника SF-36, що передбачає застосування восьми блоків запитання для з'ясування рівня якості життя пацієнтів пульмонологічного профілю. **Результати роботи та ключові висновки.** Нами обстежено 25 чоловіків у віці 56–64 роки, яким діагностовано ХОЗЛ. Для порівняння отриманих результатів додатково обстежено 17 практично здорових чоловіків того ж віку. Проведення опитування для з'ясування впливу фізичної активності на якість життя пацієнтів із ХОЗЛ показало, що середнє значення оцінки в балах у них було достовірно меншим за таке в здорових пацієнтів, що дає підстави стверджувати про суттєвий вплив наявності хвороби на їх руховий режим.

Проте оцінка відповідей, що стосувалися ролі фізичних проблем в обмеженні їхньої життєдіяльності, засвідчила, що чоловіки з ХОЗЛ не вважають наявність хвороби тією причиною, що заважає їм виконувати повсякденну роботу.

Як висновок, маємо певну неузгодженість у ставленні осіб чоловічої статі з ХОЗЛ до змісту своєї хвороби та її впливу на їхню якість життя. Отримані результати свідчать про потребу включення до реабілітаційної програми таких пацієнтів факторів, які дали їм можливість усвідомити зміст хвороби і її вплив на організм. Одним із таких чинників ми розглядаємо психологічну реабілітацію.

**Ключові слова:** якість життя, захворювання легень, опитування.

**Роксолана Горбатая. Оценка качества жизни больных с хроническим обструктивным заболеванием легких с применением опросника SF-36. Актуальность темы исследования.** Хроническое обструктивное

заболевание легких сегодня занимает одно из первых мест в структуре заболеваемости взрослого трудоспособного населения Украины. Остроты проблеме добавляют экономические потери в общегосударственном масштабе, которые обусловлены стоимостью лечения и значительным ухудшением качества жизни таких лиц. Необходимость повышения эффективности восстановительного лечения таких пациентов требует подбора быстрых и информативных методов диагностики их функционального состояния. **Цель исследования** – установить уровень качества жизни пациентов с ХОБЛ с применением опросника SF-36. **Метод исследования** – анкетирование с помощью опросника SF-36, который предусматривает применение 8 блоков вопросов для выяснения уровня качества жизни пациентов пульмонологического профиля. **Результаты работы и ключевые выводы.** Нами обследовано 25 мужчин в возрасте 56–64 лет, которым диагностирован ХОБЛ. Для сравнения полученных результатов дополнительно обследовано 17 практически здоровых мужчин того же возраста. Проведение опроса по выяснению влияния физической активности на качество жизни пациентов с ХОБЛ показало, что среднее значение оценки в баллах у них было достоверно меньше за такое у здоровых лиц и дает основания утверждать о существенном влиянии наличия болезни на их двигательный режим.

Оценка ответов, касающихся роли физических проблем в ограничении их жизнедеятельности показала, что мужчины с ХОБЛ не считают наличие болезни той причиной, которая мешает им выполнять повседневную работу.

Как вывод имеем определенную несогласованность в отношении лиц мужского пола с ХОБЛ к содержанию своей болезни и ее влияния на качество их жизни. Полученные результаты свидетельствуют о необходимости включения в реабилитационную программу таких пациентов факторов, которые бы позволили им осознать содержание болезни и ее влияние на организм. Одним из таких факторов мы рассматриваем психологическую реабилитацию.

**Ключевые слова:** качество жизни, заболевания легких, опрос.

**Formulation of a research problem and its significance.** Today the chronic obstructive pulmonary disease is one of the most important problems of the health care. It's associated with the keep steadily growing amount of people ill and died as a result of the lung diseases.

The COPD spreading among the population is about 1% and it is keep growing up to 10% among the people in their 40s and older. The late diagnostics and the effectiveness of the treatment lead to the loss of productivity and early disablement. [1; 2].

The chronic diseases are easy to progress and led to the significant limitations in all areas of the normal human life, which is more important for the patients than the symptoms themselves.

That is why the life quality is an important thing for the decision making in the area of the treatment modes and the recovery of the patients. It is worth to mention that this issue is beyond the scope of doctors and requires the supervision in pre-clinical setting. [4; 7].

Nowadays, the life quality is defined as the number of parameters which reflect the changes in the patient's life during the disease progression and its treatment with the estimate of the body condition, psychological, social and spiritual wellness, including the social relationships and the functional performance [5].

According to the World Health Organization recommendations, the life quality is defined as a personal sense of person's place in the social life in the connection with their own plans, needs and abilities.

**The goal of the article** - to define the level of the life quality of the people suffering from COPD with the help of the Short Form-36.

**Statement regarding the basic material of the research and the justification of the results obtained.** *The participants of the survey.* There were examined 25 men suffering from COPD aged 56–64. the duration of the illness is 5 years or more. All patients were examined and treated in the Ivano-Frankivsk Phthisiopulmonological Centre. For the result comparison there were additionally examined 17 almost healthy men the same age. all the participants were obtained the approval of the survey participation. The survey was conducted according to the ethical standards of commission on rights and the Declaration of Helsinki, 2008.

*Study management.* The evaluation of the life quality was conducted with the help of the Short Form-36.

The Short Form-36 designed in 1993 contains 36 questions grouped into 8 sections «vitality», «physical functioning», «bodily pain», «general health perceptions», «physical role functioning», «emotional role functioning», «social role functioning», «mental health».

Utilisation of the SF-36 allowed to get quantitative characteristics of the life quality in the sections mentioned above. The calculation of points was done with the help of computation table. the sections are

estimated from 0 to 100, i.e. 100 is the best of the possible results. The questionnaire was conducted with the patients suffering from COPD and almost recovered men the same age. The results were compared and analysed statistically.

Once the calculating the average number for each mean of a particular section had been done, the results were arranged into the table 1.

*Statistical analysis.* For the statistical testing hypothesis about the possibility of differences into the results of different groups the Student's t-test was used. Practically, the calculated Student's t-test values of parameters got during the selection were compared with their critical values, separated into a special table. In case the results got during the survey are higher than the actual outcome, the result is statistically significant. the significance level was defined according to the table ( $p < 0,05$ ;  $p < 0,01$  or  $p < 0,001$ ).

Nowadays, the chronic obstructive pulmonary disease is one of the most important issues of health care. It's associated with the keep steadily growing amount of people ill and died as a result of lung diseases.

The COPD spread among the population is about 1% and it is keep growing up to 10% among the people in their 40s and older. The late diagnostics and effectiveness of the treatment lead to loss of productivity and early disablement. [1; 2].

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That is why the life quality is an important thing for the decision making in the area of treatment mode and recovery of the patients. it is worth to mention that this issue is beyond the scope of doctors and requires the supervision in pre-clinical setting. [4; 7].

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According to the World Health Organization recommendations, the life quality is defined as a personal sense of person's place in the solial life in the connection with their own plans, needs and abilities.

Taking into account all the above, the goal of the article is to define the level o the life quality of the patients suffering from chronic obstructive pulmonary disease with the help of the Short Form-36.

*Table 1*

**The results of the patients suffering from the COPD survey conducted with the help of the Short Form-36**

<b>Sections of the SF-36</b>	<b>COPD, n =25</b>	<b>Healthy men, n =17</b>
Vitality, points (M ±m)	73,1±1,13*	99,1±0,15
Physical role functioning points, (M ±m)	92,2±1,15	99±0,13
Bodily pain points, (M +m)	92,3±1,14	99±0,1
General health perceptions, points (M±m)	74,2±1,0*	97±0,15
Social role functioning, points (M ±m)	73±1,0*	99±0,05
Emotional role functioning, points (M ±m)	94±1,3	99±0,15
Mental health, points (M ±m)	87±1,12*	99±0,15

Footnote\*-probability in the values differences in comparison to the health men ,  $p < 0,05$

The survey about the the level o the life quality of the patients suffering from COPD showed that the average value in points of the patients is quite lower than the same value of the healthy men (73,1±1,13 points vs 99,1±0,15 points in healthy men;  $p < 0,05$ ). It gives ground for claiming that the disease badly influences on the people activity.

However the analysis of the responses regarding the physical problems in the living limitations showed that the men suffered from COPD don't mention the disease as the limitation for the everyday work (92,2±1,15 points vs 99±0,13 points for healthy men;  $p > 0,05$ ).

As a results, there is the incoherence in the male attitude to the COPD and its influence on their life quality. The results show the necessity of including the factors that gave the patients the opportunity to

realise the essence of the disease and its effect on the body. The psychological recovery is considered to be one of such factors.

The questions about the bodily pain and its influence on the life quality of the patients suffering from the COPD showed that the responses were negative. The patients either didn't feel pain or the amount of pain is so insufficient that it doesn't create negative attitude to the disease ( $92,3 \pm 1,14$  points vs  $99 \pm 0,1$  points for healthy men;  $p > 0,05$ ) thus it doesn't affect their life quality.

However, the response analysis regarding the general health perceptions showed, that the men suffering from COPD estimates their health as poor, as the average value of the section was as half as lower comparing with the same section for the recovering men ( $74,2 \pm 1,0$  points vs  $97 \pm 0,15$  points for the recovering men;  $p < 0,05$ ).

Analysing these values, the conclusion can be made: because of the bad general health perceptions men suffering from COPD neither complain about pain nor associate the health deterioration with this subjective value.

The estimate of the responses of the men suffering from COPD regarding their health (the questionnaire section «social role functioning' ) i.e. recreational activity and routine work showed the decrease in this part of their life quality compared with the healthy men ( $73 \pm 1,0$  points vs  $99 \pm 0,05$  points for the healthy men;  $p < 0,05$ ). These results enlarge the data about the social role functioning responses. According to the estimates analysis the social role functioning of the patients suffering from the COPD is lowered in comparison with the healthy men.

To conclude, the patients suffering from the COPD have less willingness for the recreational activity in its turn this decrease their social activity and requires the rehabilitation. The psychological recovery is considered to be one of such factors.

The analysis of the responses regarding the emotional problems in the patient health showed that they do not consider the COPD as a emotional factor of the life quality i.e. these men don't have emotional suffering caused by the disease. The average value in points for the patients isn't statistically differ from the average value for the healthy men. ( $94 \pm 1,3$  points vs  $99 \pm 0,15$  points for the healthy men;  $p > 0,05$ )

However the analysis of the patients responses regarding their mental health showed the divergent results. The average value for the patients was definitely less that for the healthy men. This supports the idea about the mental health deterioration and the bad effect of the disease on the life quality ( $87 \pm 1,12$  points vs  $99 \pm 0,15$  points for the healthy men;  $p < 0,05$ ).

These contradictory results related to the feeling about the disease and the mental health show that COPD worsens the life quality and requires the special treatment for the patients.

The results show the necessity of including the factors that gave the patients the opportunity to realise the essence of the disease and its effect on the body. The psychological recovery is considered to be one of such factors.

**The significance of the study** is the suggestion to use the results of the survey conducted with the help of the SF-36 for the further rehabilitation for the sake of the life quality improvement of the patients suffering from COPD.

**Conclusions and prospects for further research.** The research about the physical activity influence on the life quality of the patients suffering from the COPD showed that the average value is less that for the healthy men. It gives ground for claiming that the disease badly influences on the people activity.

However the analysis of the responses regarding the physical problems in the living limitations showed that the men suffering from COPD don't mention the disease as the limitation for the everyday work.

As a results, there is the incoherence in the male attitude to the COPD and its influence on their life quality. The results show the necessity of including the factors that gave the patients the opportunity to realise the essence of the disease and its effect on the body. The psychological recovery is considered to be one of such factors.

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