



Research Article

# Nutritional Status, Individual Traits, And Disease Incidence At An-Nur Boarding School, Surabaya

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## ABSTRACT

The research aimed to assess the nutritional status, individual characteristics, and disease incidence among students at An-Nur Islamic Boarding School in Surabaya. The study used a descriptive method with a quantitative approach and verification method. The population consisted of 200 students, with a sample of 70 students selected through simple random sampling. The questionnaire included sections on general information, nutritional status, stress levels (using DASS 21), gastritis symptoms, and scabies risk factors. Results showed that the average age of students was 19.5 years, with the majority was female (71.4%). Most students were new, with a majority having normal nutritional status (61.4%). Abnormal stress levels were found in 55.7% of students, while 74.3% did not show symptoms of gastritis. Additionally, 24.3% of students experienced scabies. The study concluded that most students were young/adolescents, predominantly female, many were new students, had normal nutritional status, high stress levels, and low incidence of gastritis and scabies. It was recommended that students maintain balanced nutrition and employ stress-reducing strategies like coping mechanisms, exercise, and mujahadah methods.

**Keywords:** Gastritis, nutrition, stress, scabies, students

## INTRODUCTION

Nutritional status is a condition resulted of the balance between nutritional intake and nutritional needs for body metabolism. Everyone needs different nutritional intake. Depends on age, gender, daily physical activity, body weight, and so on. One group that is vulnerable to nutritional problems is adults, aged >18 years (QIROMAH, 2022). Malnutrition's relative impact lies in its ability to weaken resistance to diseases that are typically non-fatal. Improving nutrition stands as a significant factor to improve resistance to disease (Fila Anisa et al., 2019). For researchers, the world of Islamic boarding schools is very interesting to study further. There are at least several reasons why Islamic boarding schools are so interesting to research, namely, first, Islamic boarding schools are indigenous educational institutions owned by Indonesia, second, they are the oldest educational institutions, third, their teaching systems use holistic methods, and fourth, they instill sincerity, have the principles of blessing and acceptance.

It is often found that the nutritional intake requirements of students are still insufficient. This is due to the limited food available in Islamic boarding schools so that the nutritional intake



consumed by the students is unbalanced. Heavy student activities and inadequate nutritional intake will cause metabolic disorders and nutritional problems (Rohimah, 2019).

Based on preliminary study data conducted at the An-Nur Islamic Boarding School in Surabaya, it was found that 54.05% of the 30 students had an abnormal Body Mass Index. The An-Nur Islamic Boarding School is a modern Islamic boarding school where the majority of students are university students.

The condition of students residing away from their parents, necessitating independence, coupled with academic demands and achievement targets within Islamic boarding schools, can precipitate stress among students. Based on research conducted by Zahrah & Fitriani (2019), the level of stress experienced by students is quite high. This situation may lead to the manifestation of numerous symptoms, including depression, persistent fatigue, irritability, anxiety, diminished efficacy, and decreased productivity (Zahrah & Fitriani, 2019).

Research conducted by Haulah (2020) stated that nutritional status and the prevalence of scabies within the Islamic boarding school setting is substantially correlated. Therefore, Islamic boarding schools are advised to improve the nutritional status of students' daily food and sanitation of school facilities (Haulah, 2020)

Students at the An-nur Islamic boarding school can buy their own food to meet their daily food needs. This makes the consumption patterns of each student different. Based on research conducted by Dilyana (2020), it is said that there is a significant relationship between diet and the incidence of gastritis in teenagers. The odds of people developing gastritis is higher in the if the diet is unhealthy compared to the counterparts (Diliyana & Utami, 2020). Based on the description above, this research aims to picture the nutritional status, individual characteristics and the incidence of disease in students at the An-Nur Islamic Boarding School in Surabaya.

## **MATERIAL AND METHODS**

The research utilized a descriptive method with a quantitative approach and was conducted at the An-nur Islamic Boarding School in Surabaya. This research starts from April to September 2023. The population consisted of 200 students, with a sample of 70 students selected through simple random sampling. Data was collected directly through interviews and self-completed questionnaire. The questionnaire was validated and comprised four sections: general information of respondents (including general characteristics, age, gender, and duration as a student), nutritional status, stress (utilizing the DASS 21 stress section), gastritis (covering signs and symptoms), and scabies (encompassing risk factors and symptoms).

This research approved by the health research ethics permit commission of the Faculty of Dentistry, Airlangga University, Surabaya with ethical code number 754/HRECC.FODM/VII/2023. Informed consent was included on each questionnaire given to respondents. The data analysis performed involved descriptive analysis to describe the nutritional status of students, individual characteristics, and the prevalence of diseases among them.

## **RESULTS AND DISCUSSION**

### **A. Respondent Characteristics**

This research was conducted in August 2023, coinciding with the end of the semester break for college students. Many students had just returned from their hometowns, and a significant portion of the respondents were new students. The following frequency distribution table presents

data on age, gender, and length of time as students at the An-Nur Islamic Boarding School in Surabaya.

**Table 1. Age Frequency Distribution of Santri at An-Nur Student Islamic Boarding School, Surabaya**

| Age (years) | n    | Frequency (%) |
|-------------|------|---------------|
| 17          | 4    | 5.7           |
| 18          | 13   | 18.6          |
| 19          | 20   | 28.6          |
| 20          | 23   | 32.9          |
| 21          | 6    | 8.6           |
| 22          | 1    | 1.4           |
| 24          | 1    | 1.4           |
| 25          | 1    | 1.4           |
| 26          | 1    | 1.4           |
| Total       | 70   | 100           |
| Mean        | 19.5 |               |
| Min         | 17   |               |
| Max         | 26   |               |

Table 1 displays the research results based on distribution according to age. The data obtained shows that the average age of the respondents was 19.5 years. Most respondents were aged 20 years, namely 32.9%, with the lowest age being 17 years and the highest being 26 years. This is because the respondents were active students studying in Surabaya and living in Islamic boarding schools.

**Table 2. Gender**

| Gender | n  | Frequency (%) |
|--------|----|---------------|
| Men    | 20 | 28.6          |
| Women  | 50 | 71.4          |
| Total  | 70 | 100           |

Table 2 displays the research results based on distribution according to gender. The data obtained shows that the majority of respondents were female, 50 students (71.4%).

**Table 3. Has been a student for a long time**

| Length of time as a student (years) | n    | Frequency (%) |
|-------------------------------------|------|---------------|
| 1                                   | 36   | 51.4          |
| 2                                   | 14   | 20.0          |
| 3                                   | 2    | 2.9           |
| 4                                   | 3    | 4.3           |
| 5                                   | 2    | 2.9           |
| 6                                   | 3    | 4.3           |
| 7                                   | 8    | 11.4          |
| 8                                   | 2    | 2.9           |
| Total                               | 70   | 100.0         |
| Mean                                | 2.60 |               |
| Min                                 | 1    |               |
| Max                                 | 8    |               |

Table 3 displays the research findings concerning the distribution based on the length of time as students. The data revealed that out of the 70 respondents, the average duration of being a student was 2.6 years. The majority of respondents, 36 (51.4%) students, were in their first year at the An-

Nur Islamic boarding school. This predominance can be attributed to the fact that most students residing at the An-Nur Islamic boarding school are newcomers who have recently commenced their studies in Surabaya.

**B. Result of nutritional status, stress, gastritis and scabies**

**Table 4. Results of analysis of nutritional status, stress, gastritis and scabies**

| <b>Variable</b>         | <b>n</b> | <b>Frequency</b> | <b>Mean</b> | <b>Min</b> | <b>Max</b> |
|-------------------------|----------|------------------|-------------|------------|------------|
| <b>Nutrition Status</b> |          |                  |             |            |            |
| Skinny                  | 22       | 31.4             |             |            |            |
| Normal                  | 43       | 61.4             | 21.04       | 14.61      | 31.14      |
| Fat                     | 5        | 7.1              |             |            |            |
| <b>Stres</b>            |          |                  |             |            |            |
| Normal                  | 19       | 27.1             |             |            |            |
| Mild                    | 12       | 17.1             | 7.66        | 0          | 15         |
| Moderate                | 24       | 34.3             |             |            |            |
| Severe                  | 14       | 20.0             |             |            |            |
| Very severe             | 1        | 1.4              |             |            |            |
| <b>Gastritis</b>        |          |                  |             |            |            |
| there are symptoms      | 18       | 25.7             | 17.14       | 10         | 29         |
| there are no symptoms   | 52       | 74.3             |             |            |            |
| <b>Skabies</b>          |          |                  |             |            |            |
| Yes                     | 17       | 24.3             | 2.21        | 0          | 6          |
| No                      | 53       | 75.7             |             |            |            |

Table 4 displays the outcomes of bivariate analysis concerning the nutritional status variable of the students, assessed using the BMI formula. The majority of students exhibited normal nutritional status, with 43 (61.4%) students having an average BMI score of 21.04.

Nutritional status can be influenced by various factors, including daily diet, physical activity and sleep duration (Mufidah & Soeyono, 2021). Student An-Nur, most of whom are students, also have a role in this nutritional status. Students' eating patterns are characterized by often skipping breakfast, dieting, consuming snacks, consuming little vegetables, and eating the highest energy dense foods. The college period is also a time when students start to be active and take up rest time, which affects physical activity (Multazam, 2022).

The next variable is the stress status of the students, which is measured using the DASS 21 questionnaire. From table 4, the results show that more than half of the respondents have moderate to very severe stress status, 39 (55.7%) of the students. The average stress score for students is 7.66 with the highest score being 15.

The high level of stress among students who also play the role of students is caused by several factors. According to (Mufidah & Soeyono, 2021), students cannot be separated from stress. It is known that 6% of students in Indonesia have experienced stress. Several factors that cause stress in students are the tendency to postpone assignments, lack of self-confidence, difficulty understanding the material, and economic problems. According to Afriani et al., (2019), stress in students can be caused by academic factors, competition, relationships between friends, ways of thinking, and environmental factors(Afriani et al., 2019).

Fitriani (2020) said that stress in teenage students is caused by a lot of boarding school learning activities, memorization that must be mastered and other demands that must be achieved. If students experience stress, it will have an impact on their activities in participating in activities at the Islamic boarding school and will have difficulty carrying out their responsibilities as a student.(Fitriani, 2020)

According to research conducted by Rahmah (2019), the highest prevalence of stress problems in adolescents is between the ages of 17-18 years. Students who experience stress can have positive or negative impacts. Increasing the amount of stress in students will reduce their ability to participate in the learning process. In fact, if it is felt to be too heavy, it can trigger problems with memory, concentration, problem solving abilities, and the ability to complete developmental tasks.(Rahmah et al., n.d.)

The large number of students who are new to the An-Nur Islamic Boarding School is also a factor in the high level of stress. Research conducted by Siti Roihanah (2022) in research conducted at the Roudlotussyussubban Islamic boarding school shows that new students experience severe stress disorders(Roihanah, 2022) Research conducted by Maulana (2022) states that the majority of new students experience stress in the moderate category due to environmental, family, personal factors and the demands and pressures that exist(Maulana et al., 2022).

The next variable is gastritis status which is measured using a questionnaire regarding the presence or absence of gastritis symptoms in the respondent. From table 4 it is known that the majority of students do not have symptoms of gastritis as many as 52 (74.3%) students with an average score of 17.14.

Most gastritis occurs due to functional gastritis, namely digestive tract disorders that are not triggered by stomach problems alone, but are caused by the sufferer's poor and irregular eating patterns(Sitompul et al., 2021).

Students who are in their productive period are vulnerable to suffering from gastritis. This occurs due to busy activities and a lifestyle that pays little attention to health, as well as the demands of lecture assignments which can trigger stress and anxiety. If this situation persists for a long time, it can trigger digestive disorders, namely gastritis(Uwa et al., 2019).

Irregular eating patterns will make it difficult for the stomach to adapt. If this continues for a long time, excess stomach acid will be produced which can irritate the stomach walls(Anshari & Suprayitno, 2019). The An-Nur Islamic Boarding School does not provide food rations and allows its students to buy their own food outside the boarding school so that the students can freely determine their own food menu.

The next variable is scabies status which is measured using a questionnaire regarding risk factors and symptoms of scabies in respondents. From table 4 it is known that the incidence of scabies only occurred in a small number of respondents, 18 (24.3%) with an average score of 2.21.

According to research conducted by Ihtiarintyas (2019), the risk factors for transmitting scabies to students in Islamic boarding schools are environmental cleanliness, contact with sufferers, gender and age. The most dominant factor related to the transmission of scabies is environmental cleanliness(Ihtiarintyas, 2019).

In Islamic boarding schools, clean and healthy living behavior, especially personal hygiene, generally receives little attention from the students. Living together with a group of people, such as in an Islamic boarding school, carries the risk of easily contracting various skin diseases, especially scabies. Transmission occurs if personal and environmental hygiene is not maintained properly(Rachma Nisa et al., 2019).

Scabies can occur because living with a group of people in an Islamic boarding school carries a risk of easily contracting various diseases, especially skin diseases. Clean and healthy living behavior, especially personal hygiene, generally receives little attention from students. Living together with a group of people, such as in a boarding school, carries the risk of easily contracting various skin diseases, especially scabies (Nadiya et al., 2019).

From observations made during data collection interviews, the majority of students at the An-Nur Islamic Boarding School tend to have good hygiene behavior. This is because as collage students they receive sufficient education about personal hygiene from the campus and their own environment. This is supported by the boarding school in providing personal hygiene facilities that can meet the personal hygiene needs of the students.

## **CONCLUSION AND SUGGESTION**

### **Conclusion**

To be concluded most of the students are still young/adolescents, the majority are women, many are new students, the majority have normal nutritional status, high stress levels, low incidence of gastritis and scabies.

### **Suggestion**

It is recommended that students maintain balanced nutrition, avoid factors that cause gastritis and scabies and apply stress reduction strategies such as coping mechanisms, exercise and mujahadah methods.

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## **CONFLICT OF INTEREST**

The authors declare no conflict of interest.

## **REFERENCES**

- Afriani, A. E., Margawati, A., & Dieny, F. F. (2019). Tingkat Stres, Durasi Dan Kualitas Tidur, Serta Sindrom Makan Malam Pada Mahasiswi Obesitas Dan Non Obesitas Fakultas Kedokteran. *Sport And Nutrition Journal*, 1(2), 63–73. <https://doi.org/10.15294/spnj.v1i2.35014>
- Anshari, S. N., & Suprayitno, S. (2019). Hubungan Stres Dengan Kejadian Gastritis Pada Kelompok Usia 20-45 Tahun Di Wilayah Kerja Puskesmas Bengkuring Kota Samarinda Tahun 2019. *Borneo Studies And Research*, 1(1), 140–145. <https://journals.umkt.ac.id/index.php/bsr/article/view/453>
- Diliyana, Y. F., & Utami, Y. (2020). Hubungan Pola Makan Dengan Kejadian Gastritis Pada Remaja. *Journal Of Nursing Care & Biomolecular*, 5(1). <http://jnc.stikesmaharani.ac.id/index.php/jnc/article/view/148/162>
- Fila Anisa, A., Darozat, A., Aliyudin, A., Maharani, A., Irfan Fauzan, A., Adi Fahmi, B., Budiarti, C., Ratnasari, D., Fadilah, D. N., & Apriyanti Hamim Abstrak, E. (2019). Permasalahan Gizi Masyarakat Dan Upaya Perbaikannya.
- Fitriani, L. (2020). Hubungan Tingkat Stres Remaja Dengan Kemampuan Adaptasi Di Pondok Pesantren Kota Tanggerang. *Jurnal Kesehatan Pertiw*.
- Haulah, N. (2020). Hubungan Status Gizi Dengan Penyakit Skabies Pada Santri Di Pondok Pesantren Kha Wahid Hasyim Bangil.
- Ihtiarintyas, Suci. (2019). Faktor Risiko Penularan Penyakit Skabies Pada Santri Di Pondok Pesantren Risk Factor Of Scabies On Students Of An Nawawi Islamic Boarding School In Berjan Gebang Subdistrict Purworejo District Of Central Java. *Balaba*. <https://doi.org/10.22435/blb.v15i1.1784>

- Maulana, Z., Safitri, A., & Pamungkas, A. (2022). Tingkat Stres Pada Santri Baru Raudhatul Jannah Palangka Raya. *Jurnal Mahasiswa Bk An-Nur : Berbeda, Bermakna, Mulia*.
- Mufidah, R., & Soeyono, R. D. (2021). Pola Makan, Aktivitas Fisik, Dan Durasi Tidur Terhadap Status Gizi Mahasiswa Program Studi Gizi Unesa. In *Jurnal Gizi Unesa (Vol. 01)*.
- Multazam, L. P. (2022). Hubungan Stres, Pola Makan, Dan Aktivitas Fisik Dengan Status Gizi Mahasiswa. *Nutrizione(Nutrition Research And Development Journal)*. <https://Journal.Unnes.Ac.Id/Sju/Index.Php/Nutrizione/Article/View/52293/21737>
- Nadiya, A., Listiawaty, R., Wuni, C., Masyarakat, K., Kesehatan Masyarakat, P., & Harapan Ibu, S. (2019). Hubungan Personal Hygiene Dan Sanitasi Lingkungan Dengan Penyakit Scabies Pada Santri Di Pondok Pesantren Sa'adatuddaren The Correlation Between Personal Hygiene And Environment Sanitation With Scabies Disease In Students At Sa'adatuddaren Islamic Boarding School. In *Contagion :Scientific Periodical Of Public Health And Coastal (Vol. 2, Issue 2)*.
- Qiromah, R. (2022). Hubungan Asupan Energi, Screen Time, Dan Durasi Tidur Terhadap Status Gizi Mahasiswa Santri Pondok Pesantren Raudlatut Tholibin Tugurejo Semarang. *Uin Walisongo Semarang*.
- Rachma Nisa, F., Rahmalia Program Studi Kesehatan Masyarakat, D., & Ilmu Kesehatan, F. (2019). Faktor-Faktor Yang Berhubungan Dengan Kejadian Skabies Pada Santri Putra Di Pondok Pesantren Darurrahmah Gunung Putri Bogor. *Jurnal Untuk Masyarakat Sehat (Jukmas)*, 3(1), 16–23. <https://Ejournal.Urindo.Ac.Id/Index.Php/Jukmas/Article/View/591>
- Rahmah, A., Agustini, M., Raya Fakultas Keperawatan Dan Ilmu Kesehatan, M., & Kunci, K. (N.D.). Faktor-Faktor Yang Berhubungan Dengan Tingkat Stres Pada Santri Dan Santriwati Remaja Di Pondok Pesantren Al-Ikhlis Negara. <http://Sosains.Greenvest.Co.Id>
- Rohimah, T. F. (2019). Pengetahuan Gizi, Tingkat Konsumsi, Aktivitas Fisik Dengan Status Gizi Santriwati Pondok Pesantren Mahasiswa Syafi'urrohman Jember .
- Roihanah, S. (2022). Gambaran Tingkat Stres Pada Santri Baru Di Pondok Roudlotusysyubban Desa Tawangrejo Winong Pati. *Jurnal Profesi Keperawatan Itekes Cendekia Utama Kudus*.
- Sitompul, R., Sri, I., & Wulandari, M. (2021). Hubungan Tingkat Kecemasan Dan Pola Makan Terhadap Kejadian Gastritis Pada Mahasiswa Profesi Ners Universitas Advent Indonesia. *Coping: Community Of Publishing In Nursing*, 9(3), 258–265. <https://Doi.Org/10.24843/Coping.2021.V09.I03.P03>
- Uwa, L. F., Milwati, S., & Sulasmini. (2019). Hubungan Antara Stres Dan Pola Makan Dengan Kejadian Gastritis Yang Terjadi Di Puskesmas Dinoyo. *Nursing News : Jurnal Ilmiah Keperawatan*, 4(1). <https://Doi.Org/10.33366/Nn.V4i1.1543>
- Zahrah, S. J., & Fitriani, D. R. (2019). Gambaran Stres Santri Di Pondok Pesantren Salafiyah Nurul Amin Samarinda Tahun 2019. <https://Dspace.Umkt.Ac.Id/Handle/463.2017/1623>