

DAFTAR PUSTAKA

- Alonso-Blanco, C. *et al.* (2011) "Prevalence and Anatomical Localization of Muscle Referred Pain from Active Trigger Points in Head and Neck Musculature in Adults and Children with Chronic Tension-Type Headache," *Pain Medicine*, 12(10). Available at: <https://doi.org/10.1111/j.1526-4637.2011.01204.x>.
- Altura, B.M. and Altura, B.T. (2001) "Tension headaches and muscle tension: Is there a role for magnesium?," *Medical Hypotheses*, 57(6), pp. 705–713. Available at: <https://doi.org/10.1054/mehy.2001.1439>.
- Anindita, T.. W.W. (2022) *Buku Ajar Neurologi*. kedua. Jakarta: departemen neurologi FK UI RSCM.
- Ashina, M *et al.* (no date) *Possible mechanisms of glyceryl-trinitrate-induced immediate headache in patients with chronic tension-type headache*.
- Ashina, S. *et al.* (2006) "Generalized hyperalgesia in patients with chronic tension-type headache," *Cephalalgia*, 26(8). Available at: <https://doi.org/10.1111/j.1468-2982.2006.01150.x>.
- Ashina, S. *et al.* (2018) "Increased pain sensitivity in migraine and tension-type headache coexistent with low back pain: A cross-sectional population study," *European Journal of Pain (United Kingdom)*, 22(5). Available at: <https://doi.org/10.1002/ejp.1176>.
- Ashina, S. *et al.* (2021b) "Tension-type headache," *Nature Reviews Disease Primers*. Nature Research. Available at: <https://doi.org/10.1038/s41572-021-00257-2>.
- Ashina, S. and Bendtsen, L. (2015) "Pathophysiology of TTH: Current Status and Future Directions," in. Available at: https://doi.org/10.1007/978-3-319-15621-7_12.
- Banerjee, S. and Jones, S. (2017) "Magnesium as an Alternative or Adjunct to Opioids for Migraine and Chronic Pain: A Review of the Clinical Effectiveness and Guidelines," *Magnesium as an Alternative or Adjunct to Opioids for Migraine and Chronic Pain: A Review of the Clinical Effectiveness and Guidelines* [Preprint].
- Bendtsen, L. (2000a) "Central sensitization in tension-type headache - Possible pathophysiological mechanisms," *Cephalalgia*. Available at: <https://doi.org/10.1046/j.1468-2982.2000.00070.x>.

- Bendtsen, L., Jensen, R. and Olesen, J. (1996) "Qualitatively altered nociception in chronic myofascial pain," *Pain*, 65(2–3). Available at: [https://doi.org/10.1016/0304-3959\(95\)00239-1](https://doi.org/10.1016/0304-3959(95)00239-1).
- Chen, W.T. *et al.* (2018) "Comparison of somatosensory cortex excitability between migraine and 'strict-criteria' tension-type headache: A magnetoencephalographic study," *Pain*, 159(4). Available at: <https://doi.org/10.1097/j.pain.0000000000001151>.
- Chowdhury, D. (2012) "Tension type headache," *Annals of Indian Academy of Neurology*, pp. 83–88. Available at: <https://doi.org/10.4103/0972-2327.100023>.
- Feigin, V.L. *et al.* (2021) "Burden of Neurological Disorders across the US from 1990–2017: A Global Burden of Disease Study," *JAMA Neurology*, 78(2). Available at: <https://doi.org/10.1001/jamaneurol.2020.4152>.
- Fender, G. (2014) "Magnesium metabolism and its disorders," *Reproductive Endocrinology for the MRCOG and Beyond, Second Edition*, 24(May), pp. 189–196. Available at: <https://doi.org/10.1017/CBO9781139696920.019>.
- Fernández-De-Las-Peñas, C. *et al.* (2007) *Increased Pericranial Tenderness, Decreased Pressure Pain Threshold, and Headache Clinical Parameters in Chronic Tension-type Headache Patients*.
- Fernández-de-las-Peñas, C. (2015) "Myofascial Head Pain," *Current Pain and Headache Reports*. Available at: <https://doi.org/10.1007/s11916-015-0503-2>.
- Headache_Subcommittee (2004) "Headache Classification Subcommittee of the International Headache Society. International classification of headache disorders, 2nd edition.," *Cephalalgia*, 24.
- Jahnen-Dechent, W. and Ketteler, M. (2012) "Magnesium basics," *CKJ: Clinical Kidney Journal*, 5(SUPPL. 1). Available at: <https://doi.org/10.1093/ndtplus/sfr163>.
- Kirkland, A.E., Sarlo, G.L. and Holton, K.F. (2018) "The role of magnesium in neurological disorders," *Nutrients*, 10(6), pp. 1–23. Available at: <https://doi.org/10.3390/nu10060730>.
- Koçer, A. *et al.* (2010) "Interleukin-6 levels in tension headache patients," *Clinical Journal of Pain*, 26(8). Available at: <https://doi.org/10.1097/AJP.0b013e3181e8d9b6>.
- Köseoglu, E. *et al.* (2008) "The effects of magnesium prophylaxis in migraine without aura," *Magnesium Research*, 21(2), pp. 101–108. Available at: <https://doi.org/10.1684/mrh.2008.0132>.

- Krggh Rasmussen, B. *et al.* (1991) *EPIDEMIOLOGY OF HEADACHE IN A GENERAL POPULATION-A PREVALENCE STUDY*, *J Clin Epidemiol*.
- Leistad, R.B. *et al.* (2006) "Stress-induced pain and muscle activity in patients with migraine and tension-type headache," *Cephalalgia*, 26(1). Available at: <https://doi.org/10.1111/j.1468-2982.2005.00997.x>.
- Lenaerts, M.E. (2006) "Burden of Tension-type Headache."
- Lipchik, G.L. *et al.* (2000) "Exteroceptive suppression periods and pericranial muscle tenderness in chronic tension-type headache: Effects of psychopathology, chronicity and disability," *Cephalalgia*, 20(7). Available at: <https://doi.org/10.1046/j.1468-2982.2000.00105.x>.
- Lu, S.R. *et al.* (2013) "Incidence and risk factors of chronic daily headache in young adolescents: A school cohort study," *Pediatrics*, 132(1). Available at: <https://doi.org/10.1542/peds.2012-1909>.
- Lyngberg, A.C. *et al.* (2005) "Incidence of primary headache: A Danish epidemiologic follow-up study," *American Journal of Epidemiology*, 161(11). Available at: <https://doi.org/10.1093/aje/kwi139>.
- Martin, P.R., Milech, D. and Nathan, P.R. (1993) "Towards a Functional Model of Chronic Headaches: Investigation of Antecedents and Consequences," *Headache: The Journal of Head and Face Pain*, 33(9). Available at: <https://doi.org/10.1111/j.1526-4610.1993.hed3309461.x>.
- Mayer, M.L., Westbrook, G.L. and Guthrie, P.B. (1984) "Voltage-dependent block by Mg²⁺ of NMDA responses in spinal cord neurones," *Nature*, 309(5965). Available at: <https://doi.org/10.1038/309261a0>.
- Mishima, K. *et al.* (no date) *Platelet Ionized Magnesium, Cyclic AMP, and Cyclic GMP Levels in Migraine and Tension-Type Headache*.
- Nash, J.M. and Theborge, R.W. (2006) "Understanding psychological stress, its biological processes, and impact on primary headache," *Headache*. Available at: <https://doi.org/10.1111/j.1526-4610.2006.00580.x>.
- Nattagh-Eshtivani, E. *et al.* (2018) "The role of nutrients in the pathogenesis and treatment of migraine headaches: Review," *Biomedicine and Pharmacotherapy*, 102(March), pp. 317–325. Available at: <https://doi.org/10.1016/j.biopha.2018.03.059>.
- Olesen, J. (2018) "Headache Classification Committee of the International Headache Society (IHS) The International Classification of Headache Disorders, 3rd edition," *Cephalalgia*. SAGE Publications Ltd, pp. 1–211. Available at: <https://doi.org/10.1177/0333102417738202>.



- PERDOSSI (2018) *DIAGNOSIS DAN PENATALAKSANAAN NYERI KEPALA. PERTAMA*. Edited by S Hasan et al. Surabaya : Airlangga University Press.
- "Putri, suci" (2016) *Karakterist Penderita Nyeri Kepala Tipe Tegang di Puskesmas Kassi-Kassi*.
- Putu, I. and Widyadharma, E. (2017) *KORELASI TENSION-TYPE HEADACHE DENGAN GANGGUAN KUALITAS HIDUP MAHASISWA FAKULTAS KEDOKTERAN UNIVERSITAS UDAYANA Purple Sweet Potato Extract Lowers Levels of Malondialdehyde, Prostaglandin E2, Expression of Microglial P2X4R and Decrease Neuropathic Pain Behavior in Wistar Rat with Peripheral Nerve Injury View project Gadget and Tension Type Headache View project*. Available at: <https://www.researchgate.net/publication/318652521>.
- Rossi, P. *et al.* (2011) "The contribution of clinical neurophysiology to the comprehension of the tension-type headache mechanisms," *Clinical Neurophysiology*. Available at: <https://doi.org/10.1016/j.clinph.2010.12.061>.
- Sarchielli, P. *et al.* (1992) "Serum and salivary magnesium levels in migraine and tension-type headache. Results in a group of adult patients."
- Seo, J.W. and Park, T.J. (2008) "Magnesium metabolism," *Electrolyte and Blood Pressure*, 6(2), pp. 86–95. Available at: <https://doi.org/10.5049/EBP.2008.6.2.86>.
- Stovner, L.J. *et al.* (2018) "Global, regional, and national burden of migraine and tension-type headache, 1990–2016: a systematic analysis for the Global Burden of Disease Study 2016," *The Lancet Neurology*, 17(11), pp. 954–976. Available at: [https://doi.org/10.1016/S1474-4422\(18\)30322-3](https://doi.org/10.1016/S1474-4422(18)30322-3).
- Teigen, L. and Boes, C.J. (2014) "An evidence-based review of oral magnesium supplementation in the preventive treatment of migraine," *Cephalalgia*, 35(10), pp. 912–922. Available at: <https://doi.org/10.1177/0333102414564891>.
- Thomas, J. *et al.* (1994) "Migraine treatment by oral magnesium intake and correction of the irritation of buccofacial and cervical muscles as a side effect of mandibular imbalance.," *Magnesium research : official organ of the International Society for the Development of Research on Magnesium*, 7(2).
- Vink and Mirlai, R. and N. (2011) *Magnesium in The Central Nervous System*. South Australia: The university of Adelaide.

Xue, W. *et al.* (2019) "The effect of magnesium deficiency on neurological disorders: A narrative review article," *Iranian Journal of Public Health*, 48(3), pp. 379–387. Available at: <https://doi.org/10.18502/ijph.v48i3.880>.

REKOMENDASI PERSETUJUAN ETIK
 Nomor : 364/UN4.6.4.5.31/ PP36/ 2022

Tanggal: 26 Juli 2022

Dengan ini Menyatakan bahwa Protokol dan Dokumen yang Berhubungan Dengan Protokol berikut ini telah mendapatkan Persetujuan Etik :

No Protokol	UH22070336		No Sponsor Protokol	
Peneliti Utama	dr. Amaludin Jaelani		Sponsor	
Judul Peneliti	HUBUNGAN KADAR MAGNESIUM SERUM DENGAN FREKUENSI SERANGAN DAN INTENSITAS NYERI KEPALA TIPE TEGANG			
No Versi Protokol	2	Tanggal Versi	25 Juli 2022	
No Versi PSP	2	Tanggal Versi	25 Juli 2022	
Tempat Penelitian	RSUP Dr. Wahidin Sudirohusodo dan RS Jejaring Makassar			
Jenis Review	<input type="checkbox"/> Exempted <input checked="" type="checkbox"/> Expedited <input type="checkbox"/> Fullboard Tanggal		Masa Berlaku 26 Juli 2022 sampai 26 Juli 2023	Frekuensi review lanjutan
Ketua KEP Universitas Hasanuddin	Nama	Prof.Dr.dr. Suryani As'ad, M.Sc.,Sp.GK (K) <div style="text-align: right;"> Tanda tangan  </div>		
Sekretaris KEP Universitas Hasanuddin	Nama	dr. Agussalim Bukhari, M.Med.,Ph.D.,Sp.GK (K) <div style="text-align: right;"> Tanda tangan  </div>		

Kewajiban Peneliti Utama:

- Menyerahkan Amandemen Protokol untuk persetujuan sebelum di implementasikan
- Menyerahkan Laporan SAE ke Komisi Etik dalam 24 jam dan dilengkapi dalam 7 hari dan Lapo SUSAR dalam 72 jam setelah Peneliti Utama menerima laporan
- Menyerahkan Laporan Kemajuan (progress report) setiap 6 bulan untuk penelitian resiko tinggi dan setiap setahun untuk penelitian resiko rendah
- Menyerahkan laporan akhir setelah Penelitian berakhir
- Melaporkan penyimpangan dari prokol yang disetujui (protocol deviation / violation)
- Mematuhi semua peraturan yang ditentukan

Lampiran 1. Persetujuan rekomendasi etik



KEMENTERIAN PENDIDIKAN DAN KEBUDAYAAN
UNIVERSITAS HASANUDDIN FAKULTAS KEDOKTERAN
KOMITE ETIK PENELITIAN KESEHATAN
RSPTN UNIVERSITAS HASANUDDIN
RSUP Dr. WAHIDIN SUDIROHUSODO MAKASSAR
Sekretariat : Lantai 2 Gedung Laboratorium Terpadu
JLJL.PERINTIS KEMERDEKAAN KAMPUS TAMALANREA KM.10, Makassar 90245
Contact Person: dr. Agus Salim Bukhari, MMed, PhD, SpGK, email: agussalim@yahoo.com Fax: 0411-581431



Lampiran 2.

NASKAH PENJELASAN PADA SUBJEK

Selamat pagi Bapak/Ibu, Assalamualaikum wr.wb

Perkenalkan saya dr.Amaludin Jaelani, dari Departemen Ilmu Penyakit Saraf Fakultas Kedokteran UNHAS, akan melakukan penelitian tentang hubungan kadar magnesium serum dengan frekuensi serangan dan intensitas nyeri kepala tipe tegang kepada bapak/ibu, dengan cara pengambilan spesimen darah (serum) yang dilakukan oleh petugas laboratorium yang cakap dan terampil. Pengambilan sampel ini dilakukan sebanyak 1x sebanyak 6 cc atau 1 sendok teh pada darah vena melalui area lipatan pada bagian depan dari sendi siku. Tindakan ini tidak dipungut biaya, karena biaya ditanggung oleh peneliti.

Terlebih dahulu, kami akan mencatat identitas Bapak/ibu (nama, alamat, umur, jenis kelamin, pekerjaan, pendidikan, riwayat penyakit, riwayat pengobatan). Selanjutnya akan dilakukan pengambilan data melalui anamnesis, kemudian pemeriksaan fisik umum dan pemeriksaan saraf untuk menentukan jumlah serangan dan tingkat keparahan nyeri. Selanjutnya, kami akan melakukan pengambilan data sampel laboratorium darah bapak/ibu untuk menilai kadar magnesium dalam serum.

Penelitian ini dilakukan untuk memperoleh informasi mengenai peran magnesium sebagai nutrisi dan aktivator banyak enzim yang terlibat dalam metabolisme dan transmisi saraf, serta mengontrol aliran darah otak serta perubahan struktur dan fungsi sistem saraf sehingga diharapkan dapat mengurangi jumlah serangan dan tingkat keparahan nyeri kepala tipe tegang yang dialami oleh Bapak/ibu yang nantinya data ini akan digunakan untuk kepentingan klinis dan pengetahuan kedepannya dan juga sebagai sarana pengembangan pengobatan

tambahan senyawa nutrisi berupa magnesium untuk mengurangi jumlah serangan dan tingkat keparahan nyeri.

Keikutsertaan Bapak/Ibu dalam penelitian ini bersifat sukarela tanpa paksaan, karena itu bila Bapak/Ibu menolak ikut atau berhenti ikut pada penelitian ini jangan takut akan kehilangan hak untuk mendapatkan pelayanan kesehatan standar rutin.

Data dikumpulkan dalam penelitian ini akan disimpan dalam data komputer tanpa nama Bapak/Ibu/saudara. Hanya peneliti yang mengetahui data-data Bapak/Ibu/saudara. Hasil penelitian ini akan dipublikasikan di forum ilmiah terbatas dan jurnal nasional tanpa menampilkan identitas Bapak/ibu/saudara.

Sehubungan dengan penelitian ini, bila timbul pertanyaan lebih lanjut diharapkan dapat menghubungi: dr. Amaludin Jaelani, nomor telepon: 082315785411.

Identitas Peneliti :

Nama : dr. Amaludin Jaelani
Alamat : Bukit baruga, Jl. Tanjung Pinang
Telepon : 082315785411

DISETUJUI OLEH
KOMISI ETIK PENELITIAN
KESEHATAN
FAK. KEDOKTERAN UNHAS
Tgl.....



Lampiran 3.

FORMULIR PERSETUJUAN MENGIKUTI PENELITIAN

Saya yang bertanda tangan di bawah ini :

Nama :

Umur :

Alamat :

setelah mendengar/membaca dan mengerti penjelasan yang diberikan mengenai tujuan, manfaat apa yang akan dilakukan pada penelitian ini, menyatakan setuju untuk ikut berpartisipasi pada penelitian ini.

Saya tahu bahwa keikutsertaan saya ini bersifat sukarela tanpa paksaan, sehingga saya bisa menolak ikut atau mengundurkan diri dari penelitian ini tanpa kehilangan hak saya untuk mendapat pelayanan kesehatan kedepannya. Juga saya berhak bertanya atau meminta penjelasan pada peneliti bila masih ada hal yang belum jelas atau masih ada hal yang ingin saya ketahui tentang penelitian ini.

Saya juga mengerti bahwa semua biaya yang dikeluarkan sehubungan dengan penelitian ini, akan ditanggung oleh peneliti. Saya percaya bahwa keamanan dan kerahasiaan data penelitian akan terjamin dan saya dengan ini menyetujui semua data saya yang dihasilkan pada penelitian ini untuk disajikan dalam bentuk lisan maupun tulisan.

Bila terjadi perbedaan pendapat dikemudian hari kami akan menyelesaikannya secara kekeluargaan.

NAMA	<u>HUBUNGAN</u>	TANDA TANGAN	
TGL/BLN/THN	<u>DENGAN SUBJEK</u>		
Klien
Saksi 1
Saksi 2

Penanggung Jawab Penelitian	Penanggung Jawab Medis
Nama : dr. Amaludin Jaelani	Nama : Dr. dr. Hasmawaty Basir, Sp.S(K)
Alamat : Bukit baruga, Jl tanjung pinang	Alamat: Jl. S.Limboto No.21
Telepon : 082315785411	Telepon: 081355050333

Lampiran 4. Formulir Informed Consent

PERSETUJUAN TINDAKAN MEDIS PESERTA PENELITIAN

Saya yang bertanda tangan dibawah ini :

Nama :
Umur : Laki-laki/perempuan
Pekerjaan :
Alamat :
No.KTP :

Dengan ini menyatakan dengan sesungguhnya telah memberikan PERSETUJUAN untuk dilakukan Tindakan medis berupa anamnesis, pemeriksaan fisis, pengambilan darah untuk laboratorium terhadap diri/suami/anak/ayah/ibu/saudara saya*) Saya :

Nama :
Umur :
Pekerjaan :
Alamat :
No.KTP :
Poli Saraf/Praktek Swasta :
No.RM /ID :

Yang tujuan, sifat dan perlunya tindakan medis tersebut di atas, serta risiko yang dapat ditimbulkannya telah cukup dijelaskan oleh dokter dan telah saya mengerti sepenuhnya. Demikian pernyataan ini saya buat dengan penuh kesadaran dan telah saya mengerti sepenuhnya.

Makassar, 2022

Dokter Peneliti

Peserta/Wali*)

Dr.

.....

Saksi I

Saksi II

.....

.....

*)Coret yang tidak perlu

Lampiran 5. Formulir Penelitian



KEMENTERIAN PENDIDIKAN DAN KEBUDAYAAN
UNIVERSITAS HASANUDDIN FAKULTAS KEDOKTERAN
KOMITE ETIK PENELITIAN KESEHATAN
RSPTN UNIVERSITAS HASANUDDIN

RSUP Dr. WAHIDIN SUDIROHUSODO MAKASSAR

Sekretariat : Lantai 2 Gedung Laboratorium Terpadu

JL.JL.PERINTIS KEMERDEKAAN KAMPUS TAMALANREA KM.10, Makassar 90245

Contact Person: dr. Agus Salim Bukhari, MMed, PhD, SpGK, email: agussalim@yahoo.com Fax: 0411-581431



FORMULIR PENELITIAN

HUBUNGAN KADAR MAGNESIUM SERUM DENGAN FREKUENSI SERANGAN DAN INTENSITAS NYERI KEPALA TIPE TEGANG.

I. IDENTITAS PASIEN

1. Nama :
2. Rumah Sakit / No. Reg :
3. Jenis Kelamin :
4. Tanggal pemeriksaan :
5. Pekerjaan :
6. Pendidikan :
7. Alamat :
- 8 No. HP/ telp :

DATA PEMERIKSAAN PENUNJANG PASIEN

1. Kadar Magnesium Serum :
2. Frekuensi serangan :
3. Intensitas nyeri (NPRS). :

Lampiran 6. Data Penelitian

DATA DASAR SAMPEL PENELITIAN

No	Nama	Umur (tahun)	J K	Alamat	Frekuensi serangan	Intensitas Nyeri	Kadar Mg Serum	Fase
1	AD	27	L	Makassar	2	4-5	2,29	Interiktal
2	AN	45	P	Makassar	2-3	6	2,02	Interiktal
3	AP	33	L	Makassar	3	4-5	1,88	Interiktal
4	ANN	23	L	Makassar	2	6	1,98	Interiktal
5	BP	35	L	Makassar	3	6-7	2,33	Interiktal
6	CE	54	P	Makassar	2-3	6	2,04	Interiktal
7	CG	27	L	Makassar	2	4	2,18	Interiktal
8	DF	29	P	Makassar	1-2	4	2,05	Interiktal
9	DS	30	P	Makassar	2-3	4	2,05	Interiktal
10	DA	31	L	Makassar	2-3	3-4	2,5	Interiktal
11	EF	35	L	Makassar	1-2	3	2	Interiktal
12	EA	32	P	Makassar	3-4	5	2,17	Interiktal
13	FA	30	P	Makassar	2	4	2,13	Interiktal
14	FC P	36	P	Makassar	3-4	5	1,98	Interiktal
15	JA	31	P	Makassar	2-3	4	2,14	Interiktal
16	KN	30	L	Makassar	3-4	6	2,16	Iktal
17	LR	29	P	Makassar	3-4	5-6	1,9	Interiktal
18	MK	35	P	Makassar	3-5	5-6	1,89	Interiktal

19	MA	28	P	Makassar	1-2	4	2,07	Interiktal
20	MF	21	P	Makassar	2-3	5	1,96	Interiktal
21	MI	29	L	Makassar	1-2	2-3	2,18	Interiktal
22	MI	35	L	Makassar	2-3	4-6	2,53	Interiktal
23	MA	36	P	Makassar	2-3	4-5	2,03	Interiktal
24	ND	36	P	Makassar	1-2	4-5	2,03	Interiktal
25	PF	30	P	Makassar	2-3	5	2,19	Interiktal
26	RR	36	P	Makassar	3	5	2,08	Interiktal
27	RHH	32	P	Makassar	2	5	1,83	Interiktal
28	RF	33	L	Makassar	1-2	4-5	1,98	Interiktal
29	RT	45	P	Makassar	4	6-7	1,9	Iktal
30	RD	35	P	Makassar	15	3-4	1,8	Interiktal
31	SSi	33	P	Makassar	3-4	5-6	2,09	Interiktal
32	VY	30	L	Makassar	3-4	5	1,94	Iktal
33	VC	30	P	Makassar	1-2	4	2,13	Interiktal
34	WS	39	L	Makassar	3-4	6	2,09	Interiktal
35	YW	31	P	Makassar	15	3-4	1,92	Iktal
36	YN	51	P	Makassar	2-3	5	2,18	Interiktal

Lampiran 7. Analisis Data

Notes		
Output Created		08-AUG-2022 11:41:25
Comments		
Input	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	36
Missing Value Handling	Definition of Missing	User-defined missing values for dependent variables are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any dependent variable or factor used.
Syntax	EXAMINE VARIABLES=Umur KadarMg Frekuensi Intentitas /PLOT BOXPLOT STEMLEAF HISTOGRAM NPLOT /COMPARE GROUPS /STATISTICS DESCRIPTIVES /CINTERVAL 95 /MISSING LISTWISE /NOTOTAL.	
Resources	Processor Time	00:00:03.43
	Elapsed Time	00:00:03.00

[DataSet1]

Case Processing Summary

	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Umur	36	100.0%	0	0.0%	36	100.0%
KadarMg	36	100.0%	0	0.0%	36	100.0%
Frekuensi	36	100.0%	0	0.0%	36	100.0%
Intentitas	36	100.0%	0	0.0%	36	100.0%

Descriptives

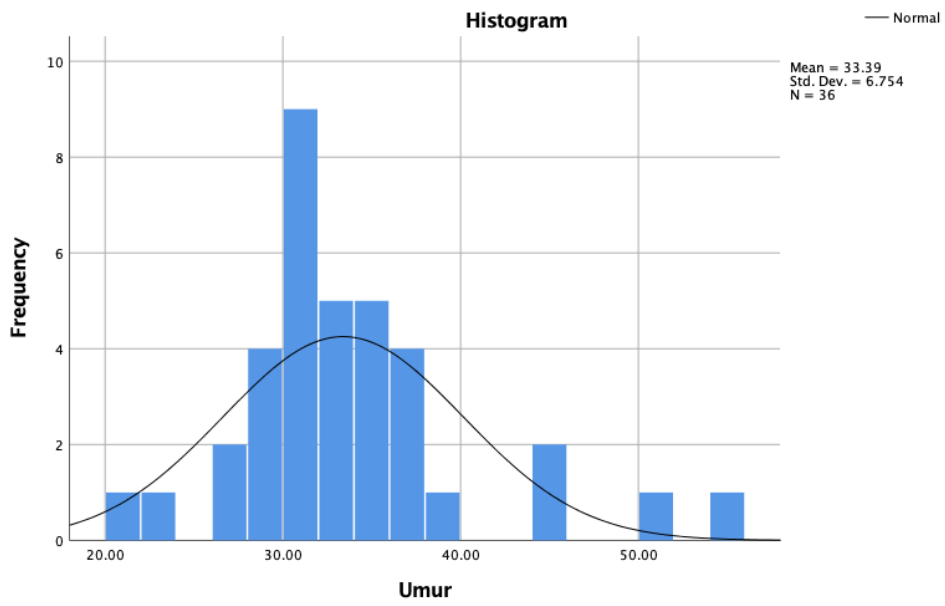
		Statistic	Std. Error
Umur	Mean	33.3889	1.12566
	95% Confidence Interval for Mean	Lower Bound	31.1037
		Upper Bound	35.6741
	5% Trimmed Mean	32.9568	
	Median	32.0000	
	Variance	45.616	
	Std. Deviation	6.75395	
	Minimum	21.00	
	Maximum	54.00	
	Range	33.00	
	Interquartile Range	5.75	
	Skewness	1.314	.393
	Kurtosis	2.521	.768
KadarMg	Mean	2.0728	.02730
	95% Confidence Interval for Mean	Lower Bound	2.0174
		Upper Bound	2.1282
	5% Trimmed Mean	2.0625	
	Median	2.0500	
	Variance	.027	
	Std. Deviation	.16379	
	Minimum	1.80	
	Maximum	2.53	
	Range	.73	
	Interquartile Range	.20	
	Skewness	.962	.393
	Kurtosis	1.389	.768
Frekuensi	Mean	2.8889	.51297
	95% Confidence Interval for Mean	Lower Bound	1.8475
		Upper Bound	3.9303
	5% Trimmed Mean	2.3210	
	Median	2.0000	
	Variance	9.473	
	Std. Deviation	3.07783	
	Minimum	1.00	
	Maximum	15.00	
	Range	14.00	

	Interquartile Range		1.00	
	Skewness		3.628	.393
	Kurtosis		13.027	.768
Intentitas	Mean		4.5833	.18846
	95% Confidence Interval for Mean	Lower Bound	4.2007	
		Upper Bound	4.9659	
	5% Trimmed Mean		4.5679	
	Median		4.5000	
	Variance		1.279	
	Std. Deviation		1.13074	
	Minimum		2.00	
	Maximum		7.00	
	Range		5.00	
	Interquartile Range		1.00	
	Skewness		.158	.393
	Kurtosis		.042	.768

	Tests of Normality						
	Statistic	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		df	Sig.		Statistic	df	Sig.
Umur	.211	36	.000	.879	36	.001	
KadarMg	.126	36	.161	.937	36	.041	
Frekuensi	.402	36	.000	.462	36	.000	
Intentitas	.197	36	.001	.931	36	.027	

a. Lilliefors Significance Correction

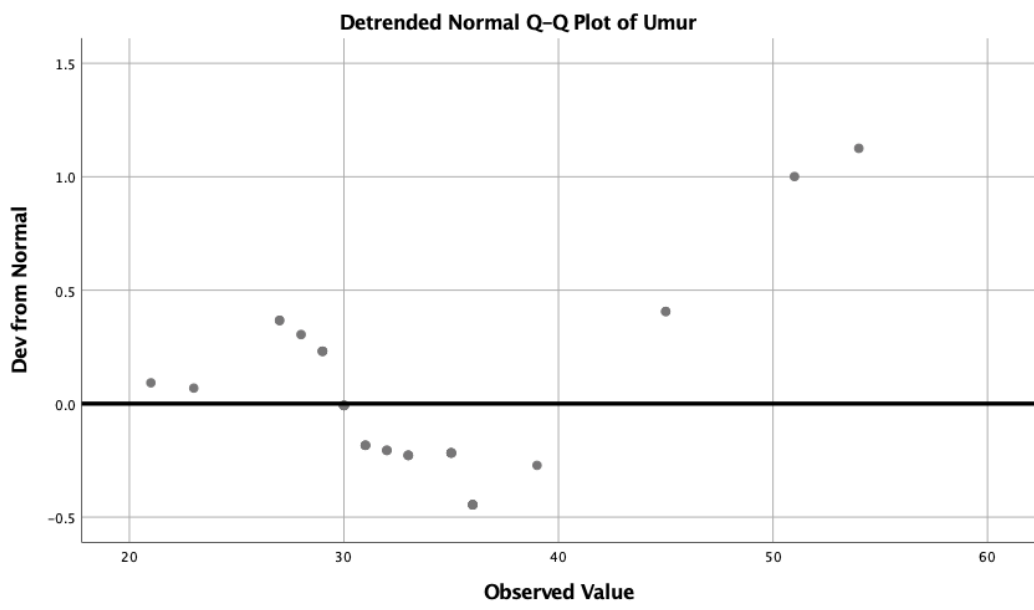
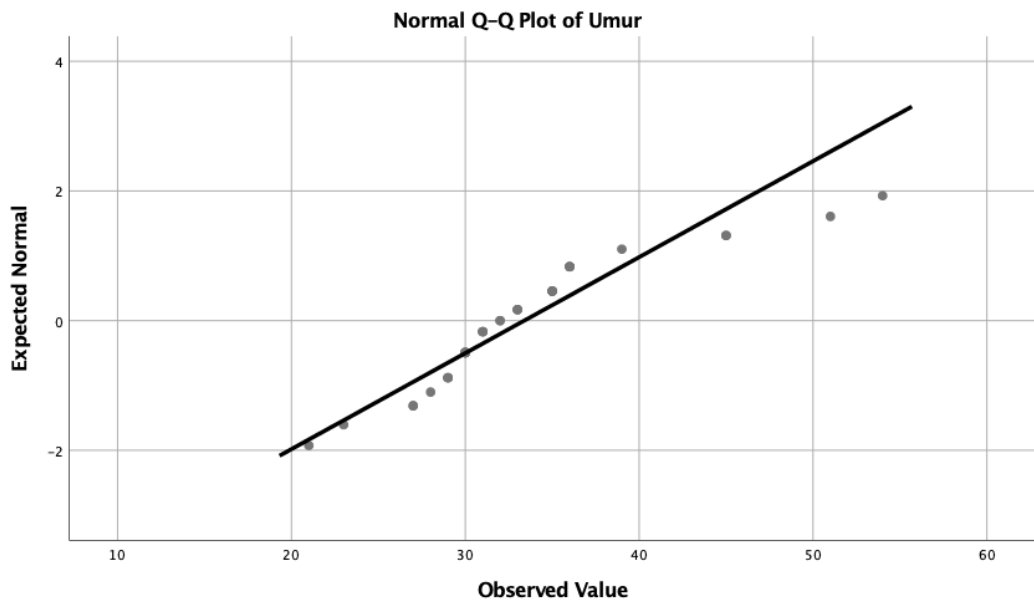
Umur

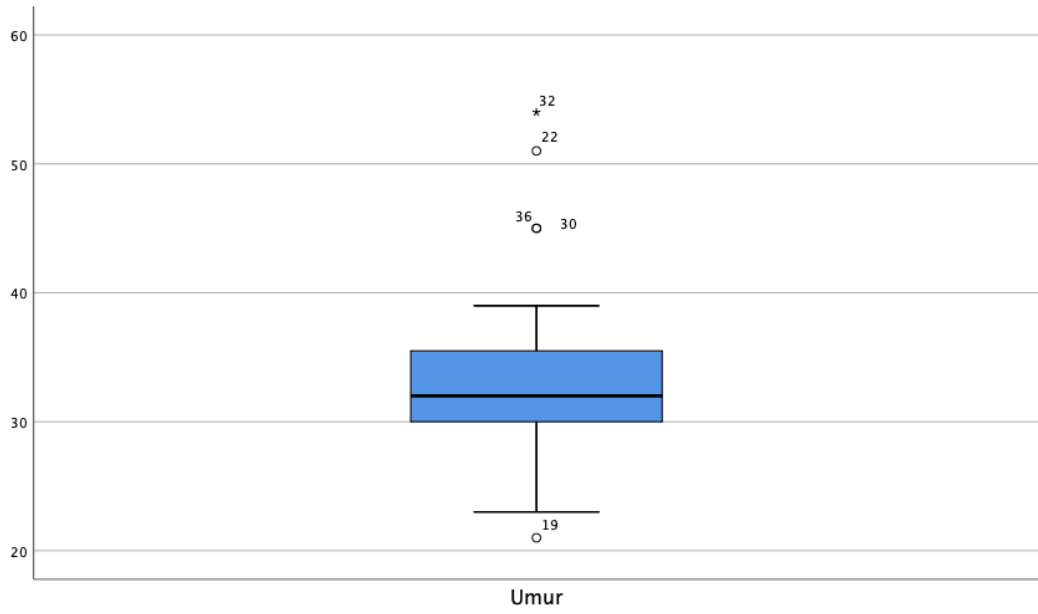


Umur Stem-and-Leaf Plot

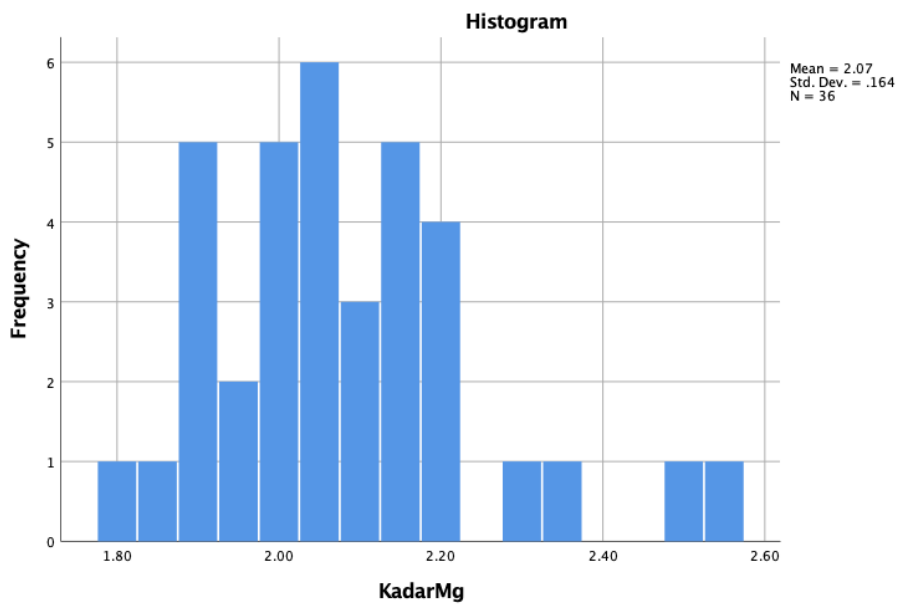
Frequency	Stem &	Leaf
1.00	Extremes	(=<21)
1.00	2 .	3
.00	2 .	
2.00	2 .	77
4.00	2 .	8999
9.00	3 .	000000111
5.00	3 .	22333
5.00	3 .	55555
4.00	3 .	6666
1.00	3 .	9
4.00	Extremes	(>=45)

Stem width: 10.00
Each leaf: 1 case(s)





KadarMg



KadarMg Stem-and-Leaf Plot

Frequency	Stem & Leaf
2.00	18 . 03
2.00	18 . 89
4.00	19 . 0024
4.00	19 . 6888
5.00	20 . 02334

```

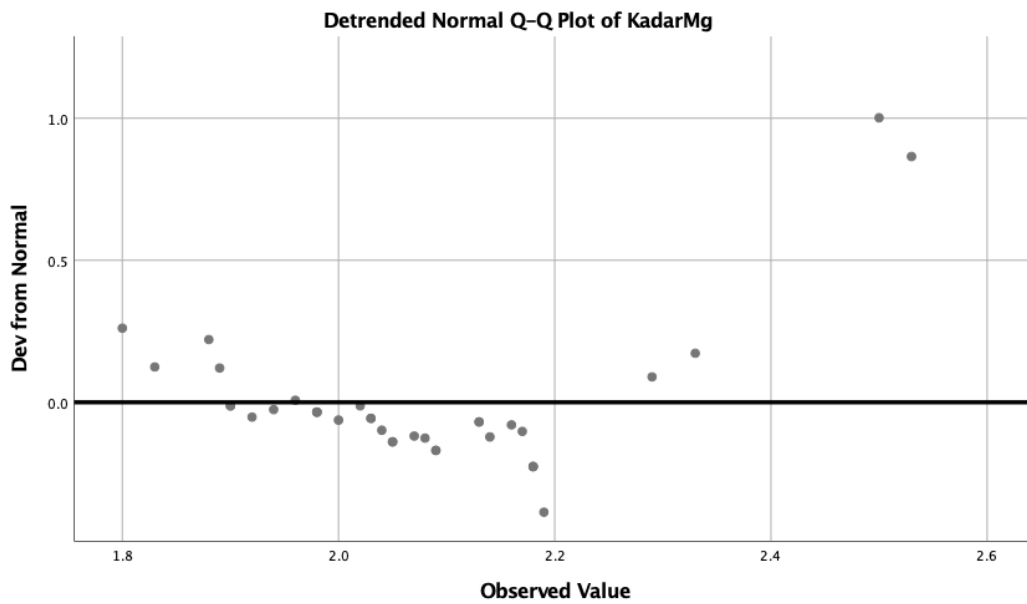
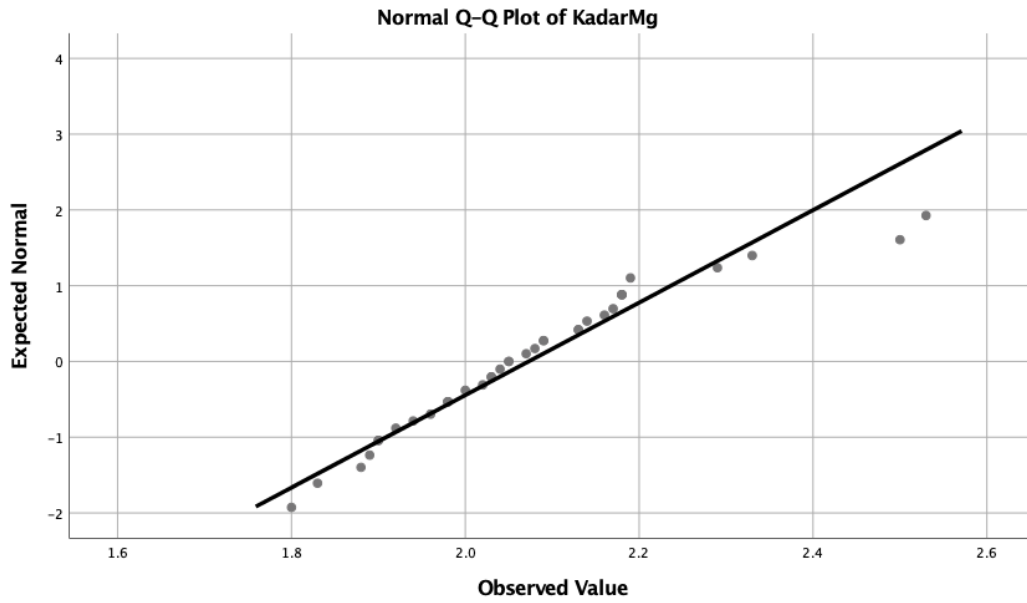
6.00      20 . 557899
3.00      21 . 334
6.00      21 . 678889
.00       22 .
1.00      22 . 9
1.00      23 . 3
2.00 Extremes (>=2.50)

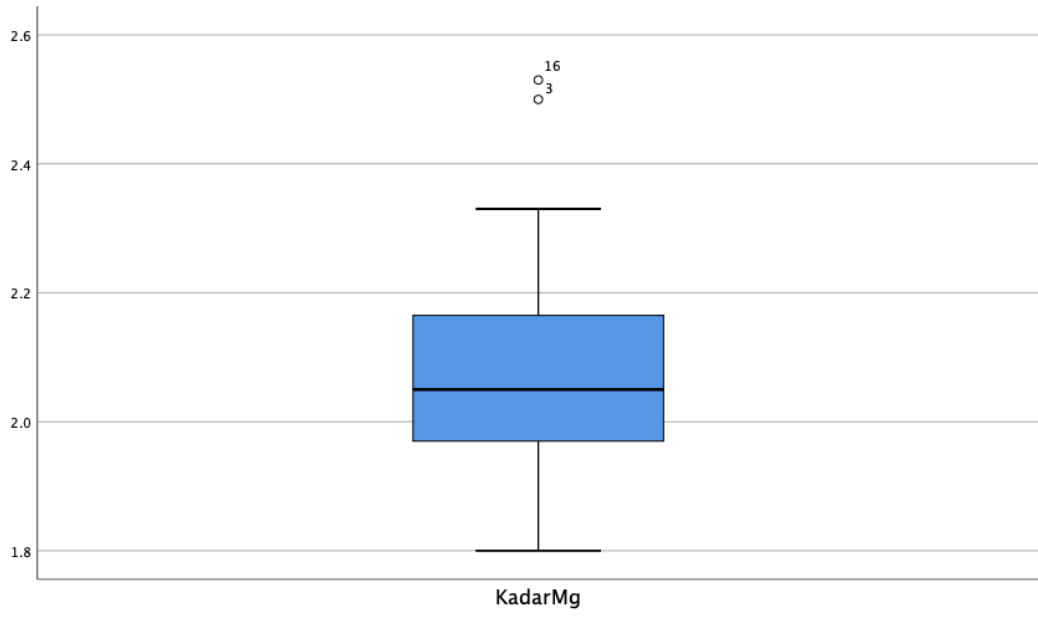
```

```

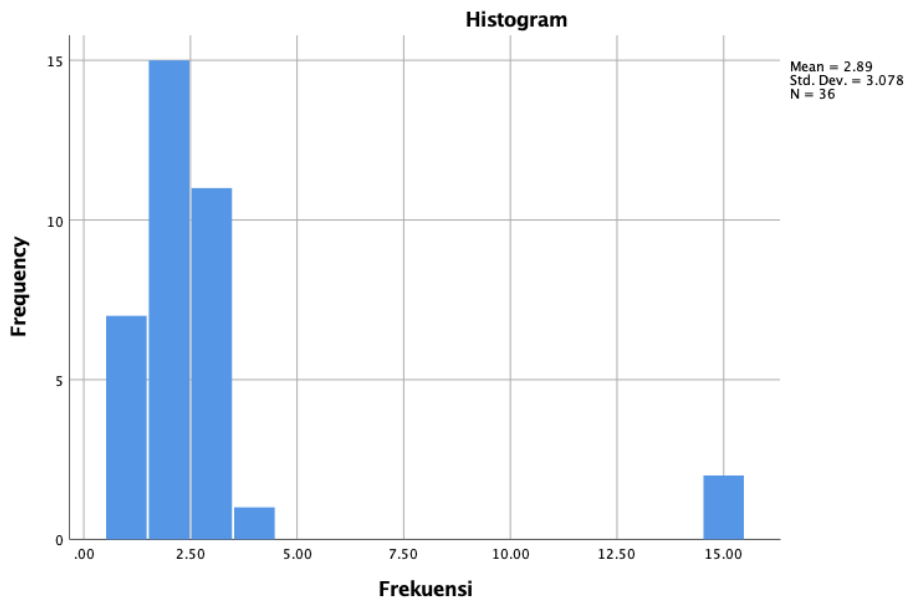
Stem width: .10
Each leaf: 1 case(s)

```





Frekuensi

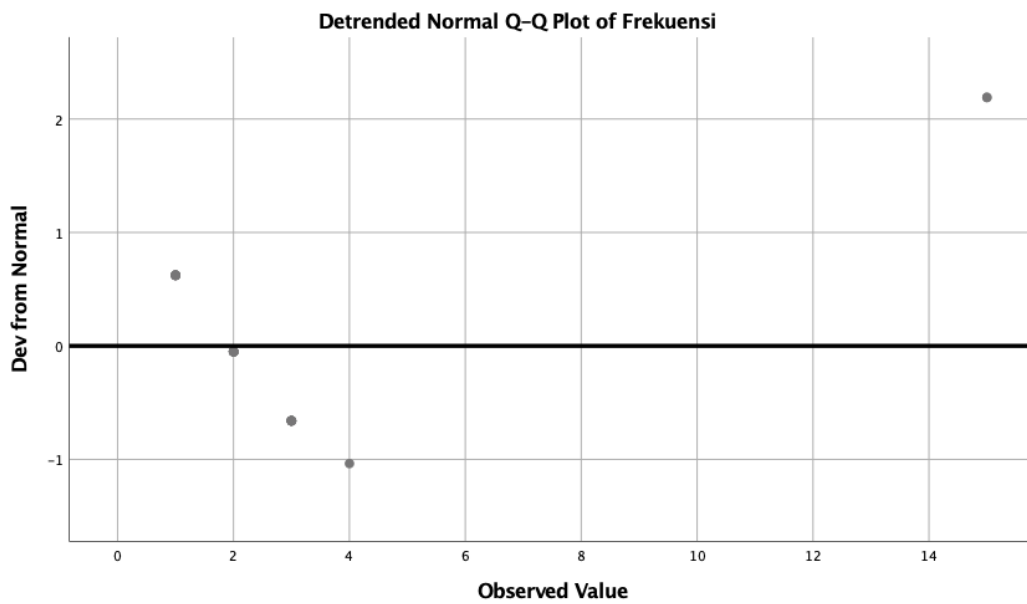
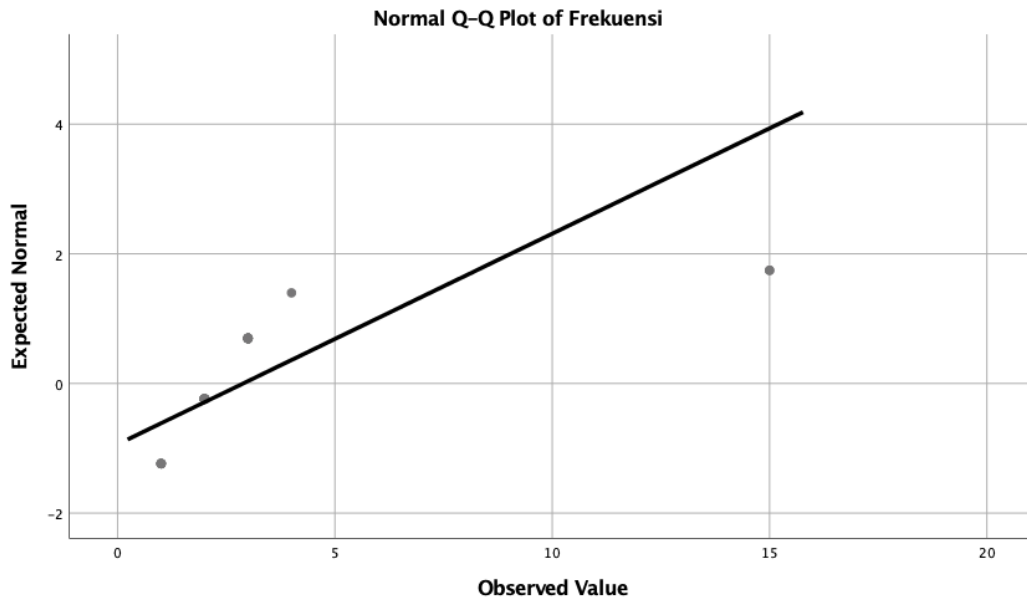


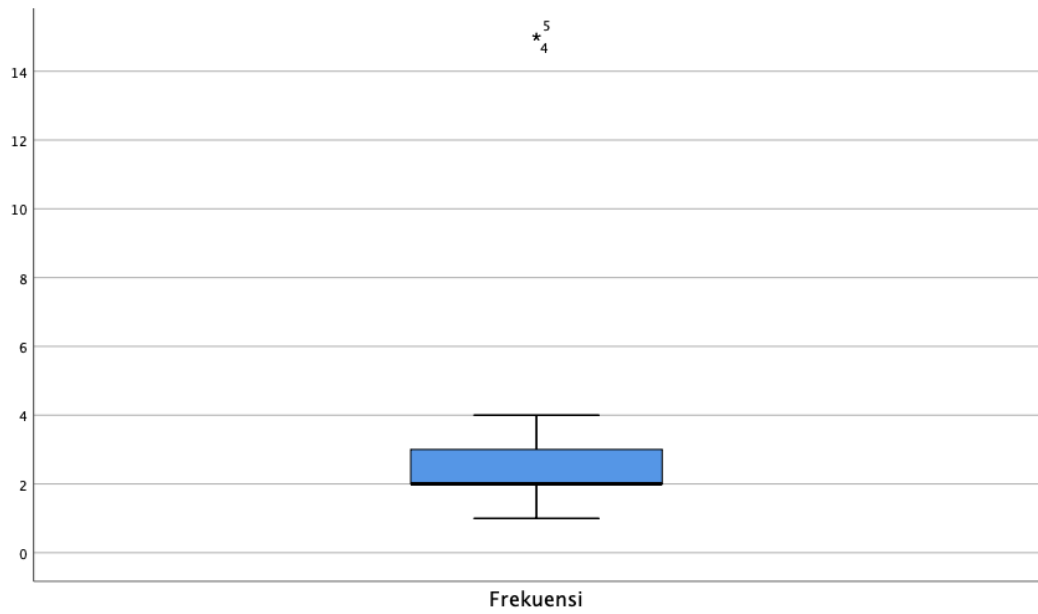
Frekuensi Stem-and-Leaf Plot

Frequency	Stem & Leaf
7.00	1 . 0000000
.00	1 .
15.00	2 . 0000000000000000
.00	2 .
11.00	3 . 00000000000

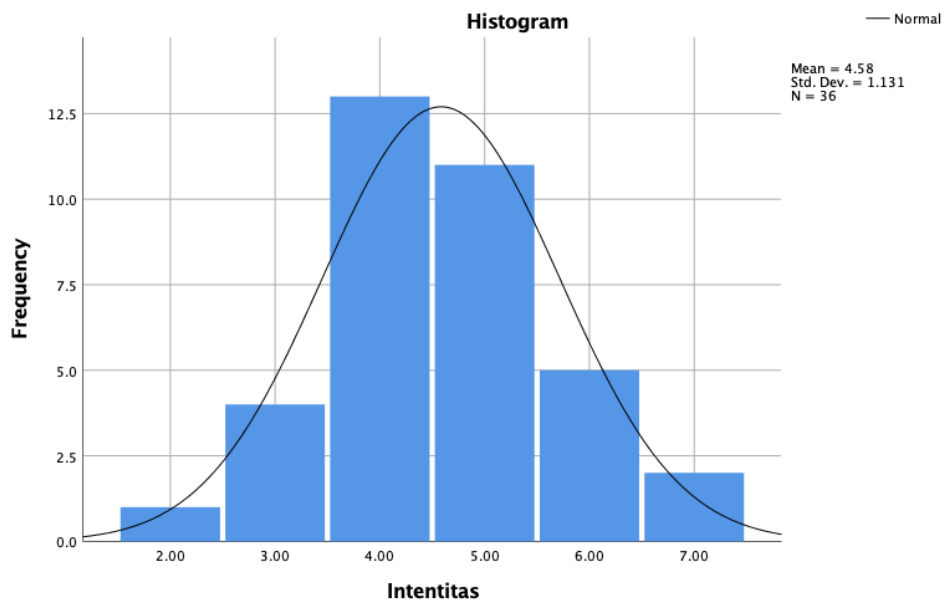
```
.00      3 .  
1.00    4 . 0  
2.00 Extremes (>=15.0)
```

Stem width: 1.00
Each leaf: 1 case(s)





Intentitas



Intentitas Stem-and-Leaf Plot

Frequency	Stem &	Leaf
1.00	Extremes	(=<2.0)
4.00	3 .	0000
.00	3 .	
13.00	4 .	00000000000000
.00	4 .	


```

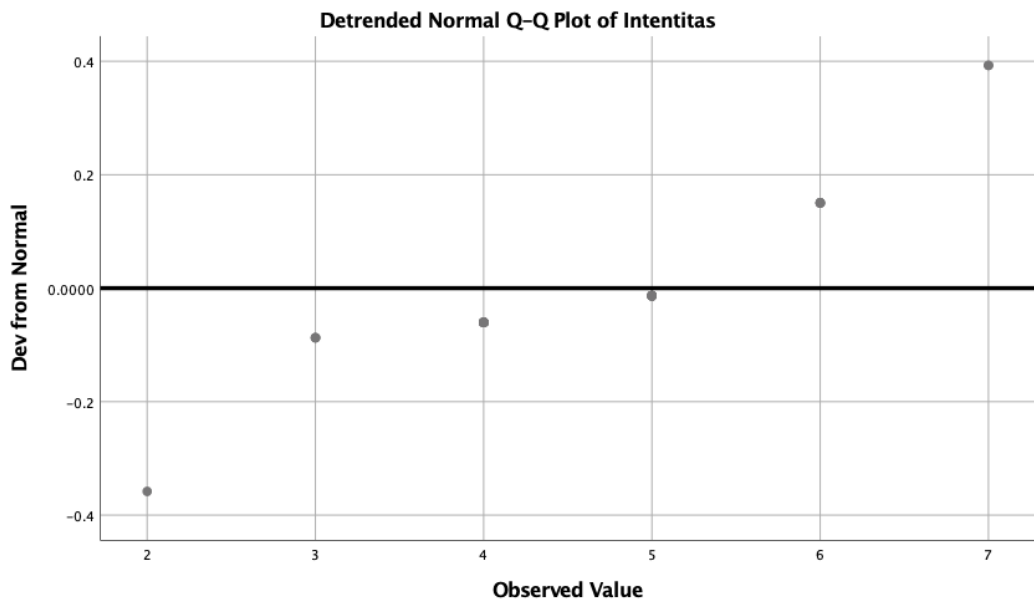
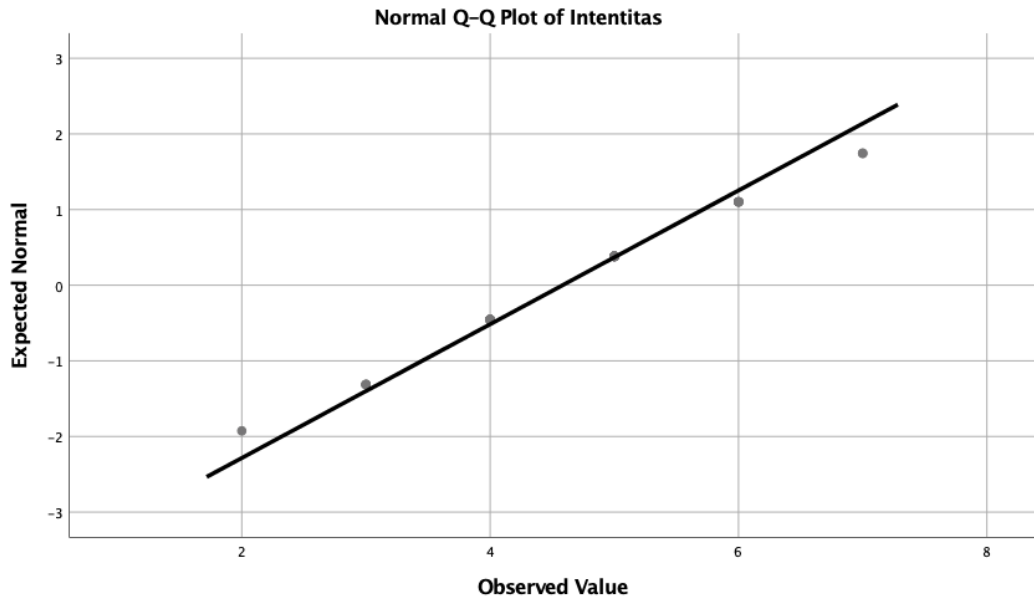
11.00      5 . 00000000000
.00        5 .
5.00       6 . 00000
2.00 Extremes (>=7.0)

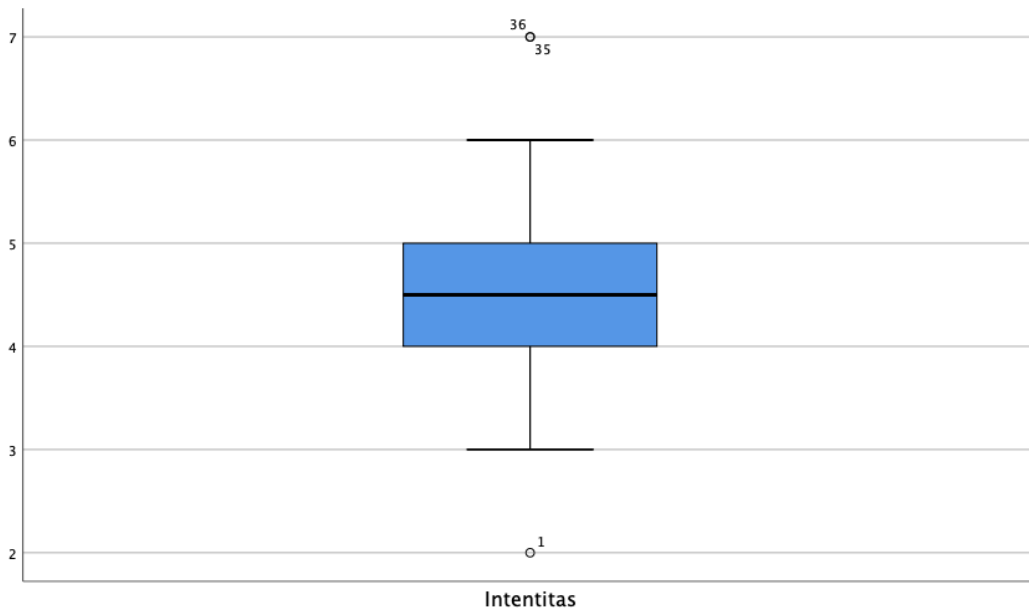
```

```

Stem width: 1.00
Each leaf:  1 case(s)

```





GRAPH
/ERRORBAR(CI 95)=KadarMg BY cat_frekuensi.

Explore

Notes		
Output Created		08-AUG-2022 11:57:45
Comments		
Input	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	36
Missing Value Handling	Definition of Missing	User-defined missing values for dependent variables are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any dependent variable or factor used.
Syntax		EXAMINE VARIABLES=KadarMg BY cat_intens /PLOT=BOXPLOT /STATISTICS=NONE /NOTOTAL.

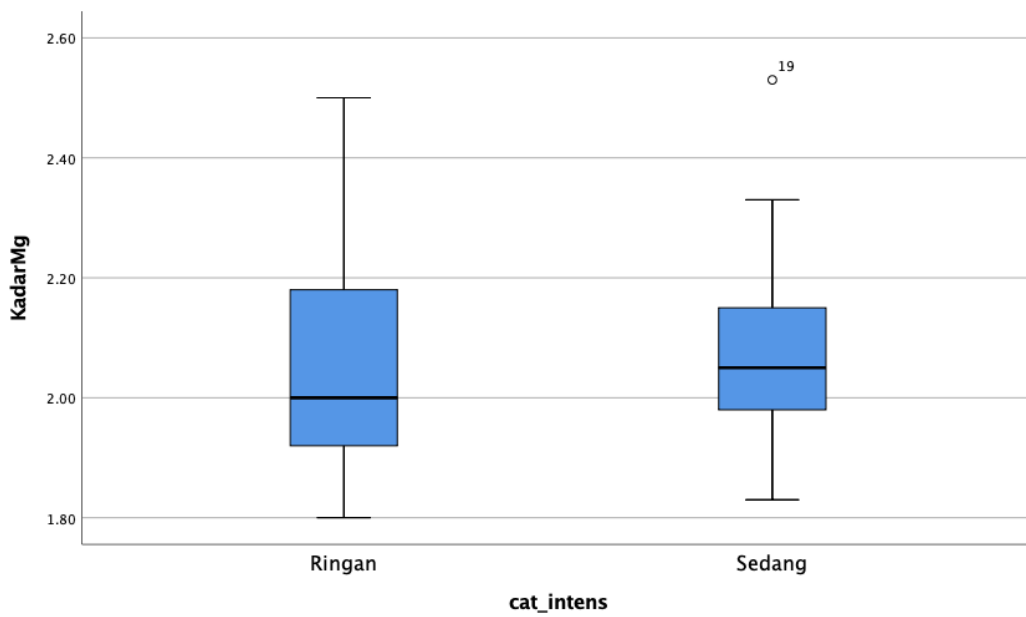
Resources	Processor Time	00:00:00.37
	Elapsed Time	00:00:01.00

cat_intens

Case Processing Summary

	cat intens	N	Valid		Cases Missing		Total	P
			N	Percent	N	Percent		
KadarMg	Ringan	5	5	100.0%	0	0.0%	5	
	Sedang	31	31	100.0%	0	0.0%	31	

KadarMg



```
EXAMINE VARIABLES=KadarMg BY cat_fre
/PLOT=BOXPLOT
/STATISTICS=NONE
/NOTOTAL.
```

Explore

Notes

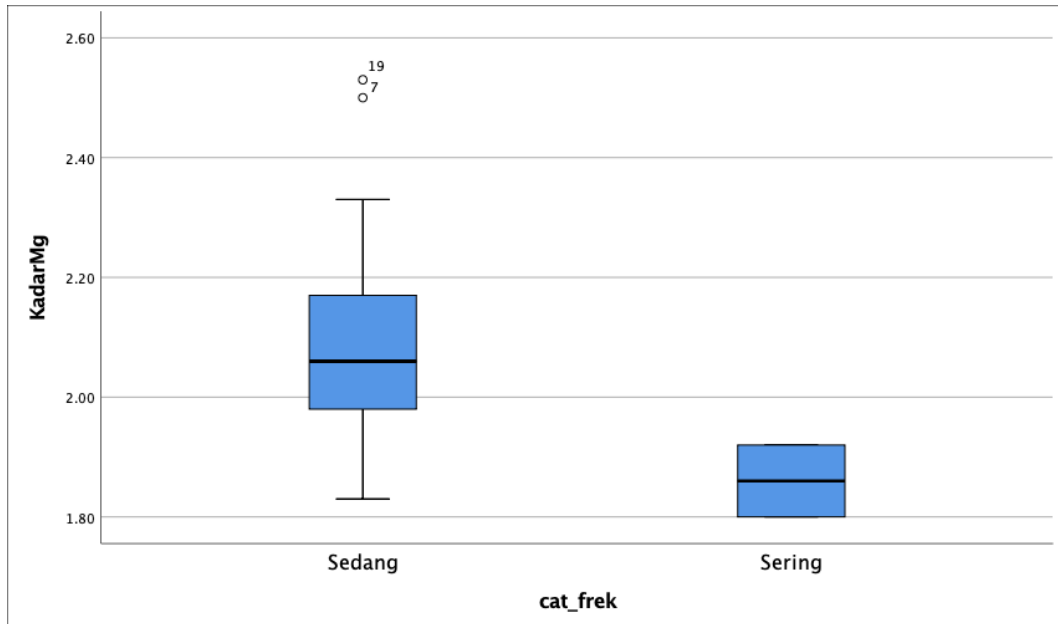
Output Created		08-AUG-2022 11:58:02
Comments		
Input	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	36
Missing Value Handling	Definition of Missing	User-defined missing values for dependent variables are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any dependent variable or factor used.
Syntax	EXAMINE VARIABLES=KadarMg BY cat_fre /PLOT=BOXPLOT /STATISTICS=NONE /NOTOTAL.	
Resources	Processor Time	00:00:00.26
	Elapsed Time	00:00:00.00

cat_fre

Case Processing Summary

	cat_fre	Valid		Cases Missing		Total	
		N	Percent	N	Percent	N	Percent
KadarMg	Sedang	34	100.0%	0	0.0%	34	
	Sering	2	100.0%	0	0.0%	2	

KadarMg



```

EXAMINE VARIABLES=KadarMg BY cat_serangan
/PLOT=BOXPLOT
/STATISTICS=NONE
/NOTOTAL.

```

Explore

Notes		
Output Created		08-AUG-2022 11:58:14
Comments		
Input	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	36
Missing Value Handling	Definition of Missing	User-defined missing values for dependent variables are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any dependent variable or factor used.

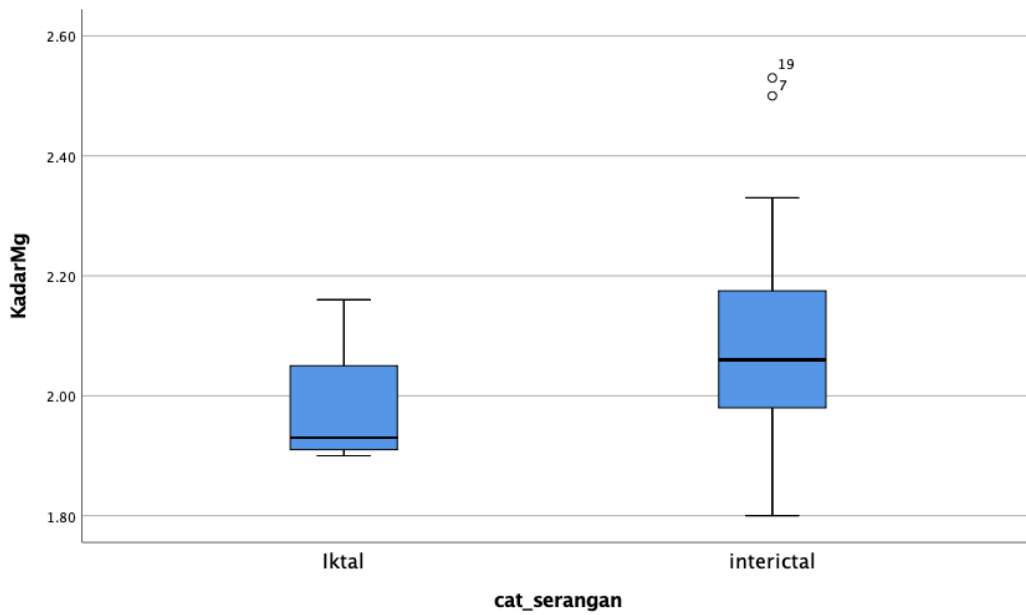
Syntax	EXAMINE VARIABLES=KadarMg BY cat_serangan /PLOT=BOXPLOT /STATISTICS=NONE /NOTOTAL.
Resources	Processor Time 00:00:00.25 Elapsed Time 00:00:00.00

cat_serangan

Case Processing Summary

KadarMg	cat_serangan	N	Valid		Cases Missing		Total
			N	Percent	N	Percent	
	lktal	4	4	100.0%	0	0.0%	4
	interictal	32	32	100.0%	0	0.0%	32

KadarMg



NPAR TESTS
/M-W= KadarMg BY cat_frekw(0 1)
/MISSING ANALYSIS.

NPar Tests

Notes		
Output Created		08-AUG-2022 12:03:40
Comments		
Input	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	36
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each test are based on all cases with valid data for the variable(s) used in that test.
Syntax	NPAR TESTS /M-W= KadarMg BY cat_fre(0 1) /MISSING ANALYSIS.	
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:01.00
	Number of Cases Allowed ^a	449389

a. Based on availability of workspace memory.

Mann-Whitney Test

		Ranks		
	cat frek	N	Mean Rank	Sum of Ranks
KadarMg	Sedang	34	19.35	658.00
	Sering	2	4.00	8.00
	Total	36		

Test Statistics^a

	KadarMg
Mann-Whitney U	5.000
Wilcoxon W	8.000
Z	-2.004

Asymp. Sig. (2-tailed)	.045
Exact Sig. [2*(1-tailed Sig.)]	.038 ^b

a. Grouping Variable: cat_fre

b. Not corrected for ties.

```

NPAR TESTS
  /M-W= KadarMg BY cat_intens(0 1)
  /MISSING ANALYSIS.

```

NPar Tests

Notes		
Output Created		08-AUG-2022 12:04:07
Comments		
Input	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	36
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each test are based on all cases with valid data for the variable(s) used in that test.
Syntax		NPAR TESTS /M-W= KadarMg BY cat_intens(0 1) /MISSING ANALYSIS.
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.00
	Number of Cases Allowed ^a	449389

a. Based on availability of workspace memory.

Mann-Whitney Test

		Ranks		
cat_intens		N	Mean Rank	Sum of Ranks
KadarMg	Ringan	5	17.20	86.00
	Sedang	31	18.71	580.00
	Total	36		

Test Statistics^a

	KadarMg
Mann-Whitney U	71.000
Wilcoxon W	86.000
Z	-.298
Asymp. Sig. (2-tailed)	.766
Exact Sig. [2*(1-tailed Sig.)]	.790 ^b

a. Grouping Variable: cat_intens

b. Not corrected for ties.

```

NPAR TESTS
  /M-W= KadarMg BY cat_serangan(0 1)
  /MISSING ANALYSIS.

```

NPar Tests

Notes

Output Created		08-AUG-2022 12:04:38
Comments		
Input	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	36
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.

Cases Used		Statistics for each test are based on all cases with valid data for the variable(s) used in that test.
Syntax		NPAR TESTS /M-W= KadarMg BY cat_serangan(0 1) /MISSING ANALYSIS.
Resources	Processor Time	00:00:00.01
	Elapsed Time	00:00:00.00
	Number of Cases Allowed ^a	449389

a. Based on availability of workspace memory.

Mann-Whitney Test

		Ranks		
cat_serangan		N	Mean Rank	Sum of Ranks
KadarMg	lktal	4	11.88	47.50
	interictal	32	19.33	618.50
	Total	36		

Test Statistics^a

	KadarMg
Mann-Whitney U	37.500
Wilcoxon W	47.500
Z	-1.335
Asymp. Sig. (2-tailed)	.182
Exact Sig. [2*(1-tailed Sig.)]	.190 ^b

a. Grouping Variable: cat_serangan

b. Not corrected for ties.

```

NONPAR CORR
/VARIABLES=KadarMg Frekuensi Intentitas cat_serangan
/PRINT=SPEARMAN TWOTAIL NOSIG
/MISSING=PAIRWISE.

```

Nonparametric Correlations

Notes		
Output Created		08-AUG-2022 12:10:45
Comments		
Input	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	36
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each pair of variables are based on all the cases with valid data for that pair.
Syntax		NONPAR CORR /VARIABLES=KadarMg Frekuensi Intentitas cat_serangan /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE.
Resources	Processor Time	00:00:00.01
	Elapsed Time	00:00:00.00
	Number of Cases Allowed	449389 cases ^a

a. Based on availability of workspace memory

			Correlations		
			KadarMg	Frekuensi	Intentitas
Spearman's rho	KadarMg	Correlation Coefficient	1.000	-.299	-.081
		Sig. (2-tailed)	.	.077	.640
		N	36	36	36
	Frekuensi	Correlation Coefficient	-.299	1.000	.401 [*]
		Sig. (2-tailed)	.077	.	.015
		N	36	36	36
	Intentitas	Correlation Coefficient	-.081	.401 [*]	1.000
		Sig. (2-tailed)	.640	.015	.
		N	36	36	36
	cat_serangan	Correlation Coefficient	.226	-.464 ^{**}	-.186

	Sig. (2-tailed)	.186	.004	.277
	N	36	36	36

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).