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Early Evidence for Prehistoric Weaving in Inner Western Anatolia: The Case of Ekşi Höyük

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Abstract

Ekşi Höyük is a Neolithic settlement located in the Upper Büyük Menderes Basin (Inner West Anatolia). Excavations that began in 2015 provide new data regarding the Neolithization process of the region. The findings indicate that the settlement was continuously occupied from the early 7th millennium BC to the mid-5th millennium BC. This study evaluates the data related to weaving within the context of Phase 4 (ca. 6200–6000/5900 BC) of the mound. The typology, spatial distribution, and potential functions of the 57 clay spindle whorls recovered from this phase have been analyzed. The spindle whorls are classified into three main types: spherical, biconical, and depressed/oval (ellipsoid). Spatial analysis demonstrates that the finds are concentrated particularly within apsidal buildings, suggesting that weaving held a significant place in household production. In contrast, it is observed that different production activities are more prominent in quadrangular structures. Finds such as weights, awls, needles, and possible shuttles serve as additional indicators supporting textile activities. Furthermore, it is suggested that clay figurines with painted clothing descriptions from Ekşi Höyük and Hacılar Höyük may indicate the symbolic aspects of weaving.

Keywords: Neolithic, Ekşi Höyük, Spindle Whorls, Weaving, Inner West Anatolia.

İç Batı Anadolu'da Tarihöncesi Dokumacılığın Erken Kanıtları: Ekşi Höyük Örneği

Öz

Ekşi Höyük, Büyük Menderes Havzası'nın yukarı kesiminde, İç Batı Anadolu'da yer alan bir Neolitik Dönem yerleşmesidir. 2015 yılında başlayan kazılar, bölgenin Neolitikleşme sürecine ilişkin yeni veriler sunmaktadır. Bulgular, yerleşmenin MÖ 7. binyıl başlarından MÖ 5. binyıl ortalarına kadar kesintisiz iskân gördüğüne işaret eder. Bu çalışma, dokumacılığa ilişkin verileri höyüğün 4. tabakası (yaklaşık MÖ 6200–6000/5900) bağlamında değerlendirmektedir. Bu tabakada ele geçen 57 ağırşağın tipolojisi, uzamsal dağılımı ve olası işlevleri analiz edilmiştir. Ağırşaklar üç ana tipte sınıflanmıştır: küresel, çift konik ve basık/oval. Uzamsal analiz, buluntuların özellikle apsidal yapılarda yoğunlaştığını göstermekte ve dokumacılığın hane içi üretimde önemli bir yer tuttuğunu düşündürmektedir. Buna karşılık, dörtgen planlı yapılarda farklı üretim faaliyetlerinin daha belirgin olduğu anlaşılmaktadır. Ağırlık, bız, iğne ve

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olası mekik gibi buluntular dokumacılık etkinliklerini destekleyen ek göstergelerdir. Ayrıca Ekşi Höyük ve Hacılar Höyük'te boya ile giysi betimi taşıyan kil heykelciklerin, dokumanın sembolik yönlerine işaret edebileceği önerilmektedir.

Anahtar Kelimeler: Neolitik, Ekşi Höyük, Ağırşak, Dokumacılık, İç Batı Anadolu.

Introduction

Evidence of prehistoric textile production has been widely documented within Western Anatolian settlements in recent years. It can be argued that textile production, which emerged in the Upper Palaeolithic period and then intensified especially in the Neolithic period, not only provided protection against climatic conditions, but also had a symbolic significance related to gender, status and group belonging. Owing to their inherent susceptibility to decay, textile remnants are extraordinarily scarce, preserved only under unique environmental conditions. Significantly, such artifacts have been documented in the Neolithic layers of settlements such as Çayönü, Çatalhöyük, and Ulucak Höyük. Among these findings, the oldest known example is a fragment of linen wrapped around a bone sickle handle discovered in the Cell Building Phase of the Çayönü settlement, dating back to the 8th millennium BCE[1]. Textile fragments from Çatalhöyük and Ulucak Höyük are from a relatively later period, roughly the last quarter of the 7th millennium BCE[2]. These samples, predominantly associated with burial contexts at Çatalhöyük, exhibit a linen composition akin to those found at Çayönü[3]. The fibre type of the Ulucak textile fragment found on the shoulder of a clay figurine has yet to be identified. The prevailing assumption suggests that plant fibres were the primary material during the Neolithic period, with animal fibres possibly becoming more prevalent from the 5th to the 4th millennium BCE. An opposing perspective draws from evidence at Tell Sabi Abyad settlement in northern Syria. These findings suggest that the significant increase and standardization of spindle whorls or perforated discs in the third quarter of the 7th millennium BCE signifies a shift in spinning technology, possibly linked to the use of animal fibres[4]. The evolution of spindle whorls aligns with faunal remains, indicating a prevalence of ovicaprids in level A2 (ca. 6385-6325 cal. BCE), constituting 83.2% of the overall assemblage. This shift is thought to reflect a transition in herd management from primarily meat-focused practices, where animals were typically slaughtered at two years of age for optimal meat yield, to a more diversified economy centred on meat production alongside secondary products[5]. Comparable to Tell Sabi Abyad, the spindle whorls found in the 6th millennium BCE layers of Domuztepe indicate suitability for wool weaving. Furthermore, the high proportion of ovicaprids, (around 80%), consisting mainly of adult males, suggests they were reared primarily for wool rather than milk[6]. The increase in the weight and diameter of spindle whorls in the Neolithic strata of Ulucak Höyük, particularly from 6200 BCE (Vb) onwards, is also attributed to wool usage. At the same time, the rise in the age of slaughtered ovicaprids from layer Vb onwards is seen as an outcome of tending to herds for wool, mirroring the practices observed at Tell Sabi Abyad and Domuztepe[7].

1 Erim – Özdoğan 2007, 83.

2 Burnham 1965, 169; Çilingiroğlu and Çilingiroğlu 2007, 368; Çilingiroğlu 2009, 15-16.

3 Ryder 1965, 175-76.

4 Rooijakkers 2012, 105-6.

5 Russell 2010, 119; Rooijakkers 2012, 105.

6 Kansa et al. 2009, 909-10.

7 Sevindik 2018, 80, 51.

Textile remains, spindle whorls, and loom weights are among the discoveries closely linked to yarn spinning. Although the absence of these objects does not necessarily mean that this activity did not exist in a settlement, their presence can be considered evidence of textile production. This is because certain spindle whorls might have been fashioned from materials like wood, which rarely survive over time, and some of these whorls could have been operated manually without the need for loom weights. A limited number of spindle whorls and loom weights from the Neolithic Age have been unearthed in Anatolia. In Southeastern Anatolia, for instance, stone and clay spindle whorls were found in open areas associated with the Late Neolithic layer of Hakemi Use, dating back to the 6th millennium BCE[8]. At Yümüktepe in Mersin, perforated discs and spindle whorls were discovered in Level XXIV, dating to the early 6th millennium BCE[9]. The excavations at Domuztepe yielded a total of 76 spindle whorls. Among 48 complete specimens, weights ranged from less than 1 g to 55 g (with an average of 20 g and a median of 18 g)[10]. Conversely, only one spindle whorl has been recovered from Çatalhöyük during its excavation history[11]. In the Lake District, although it is mentioned that spindle whorls are common in layer VI of Hacılar Höyük[12], the quantity is not specified and only seven specimens are included in the plates[13]. One bone spindle whorl was found in layer 12 of Kuruçay Höyük[14], another settlement in the region. Nearby at Bademağacı, another Neolithic centre, a few clay objects interpreted as spindle whorls/large beads due to their size (ranging from 2.1-3.3 cm in diameter) were identified[15].

Ulucak Höyük, among the Neolithic Period sites along the coastal Western Anatolian region, stands out in terms of spindle whorls and loom weights. A total of 265 spindle whorls and 42 loom weights with stratigraphic context were found in the Ve-Va levels of Ulucak Höyük, dating between 6500-6000 BCE, as well as in Level IVb, dating between 5800-5500 BCE[16]. Notably, textile production evidence was absent in Level VI (6850-6500 BCE) of the settlement, referred to as Pre-Pottery Neolithic. However, it is noteworthy that the use of loom weights at Ulucak emerged significantly later than spindle whorls, beginning in the Late Neolithic period (6000 BCE)[17]. An increase in the diameter and weight of spindle whorls found in the settlement's layers from early to late stages (Ve-IVb), particularly from building level Vb (6200-6000) onwards, indicates a correlation with changes in yarn thickness. Among the textile production-related findings at Ulucak Höyük, concrete data exist regarding the spatial distribution of spindle whorls and their variations across layers. The prevalence of spindle whorls in some locations within Level V, while scarce or absent in others, implies varying degrees of textile production importance across different households[18]. The only clear evidence of a Neolithic

8 Tekin 2020, 152-53.
9 Garstang 1953, 271.
10 Kansa et al. 2009, 909.
11 Mellaart 1967, 232, 211.
12 Mellaart 1970a, 249, 20.
13 Mellaart 1970b, 171 Plate CXVII.
14 Duru 1994, 120-247, 67.
15 Duru – Umurtak 2019, 274, 78.
16 Sevindik 2018, 80, 33.
17 Sevindik 2018, 49.
18 Sevindik 2018, 50.

loom in Anatolia originates from Level IVb of Ulucak. Eleven loom weights were discovered together within the structure known as Building No.12, potentially indicating the presence of a loom in that vicinity. It has been proposed that a *pintadera*, containing remnants of red dye (hematite) and found within the same area, could have been employed for textile dyeing[19]. In Ege Gübre, a settlement situated in Coastal Western Anatolia and dated to 6230-5880 BCE, a majority of spindle whorls were fashioned by piercing the centre of potsherds, while a small subset was crafted from stone[20]. Although loom weights and spindle whorls associated with weaving were uncovered within the Neolithic Period layers of Yeşilova Höyük (6000-5700), available information regarding their quantity is insufficient[21].

The data obtained from Ekşi Höyük revealed a significant assemblage of artefacts related to weaving. Analysing the spatial distribution of these artifacts, which include spindle whorls, loom weights, and bone needles, offers valuable insights into the organizational dynamics of weaving within the Neolithic community residing at the site.

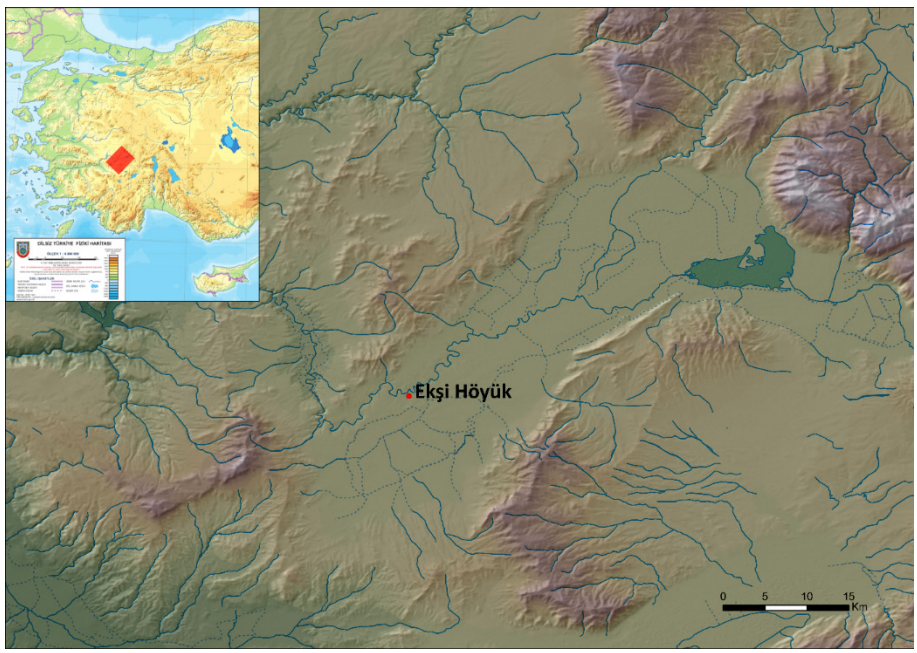

Figure 1. Location of Ekşi Höyük in Western Anatolia

19 Çilingiroğlu 2009, 14.
20 Sağlamtimur 2007, 375.
21 Bulut – Derin 2021, 143.

The Site and Its Landscape

Ekşi Höyük is situated within the Çal district of the Denizli Province, located in the Baklan Plain –a notable flatland within Denizli and situated in the upper portion of the Büyük Menderes Basin. The mound rests upon a hill that took form during the Neogene (Pliocene) Epoch. This elevation is in close proximity to the Büyük Menderes River, a primary water source for the basin, to the north, and to Geren Lake to the south –likely a result of river flooding and now desiccated[22] (Fig. 1). Roughly 3 km northwest of the mound, the terrain rises, forming the foothills of Mount Şalvan. These elevations, encompassing Büyük Çökelez Mountain and Şalvan Mountain, descend through the south-to-north oriented Seyitler (Değirmendere) Gorge, extending 5.5 km west of Ekşi Höyük, offering passage to the Çal (Erenler) Basin where the Büyük Menderes River continues its westward course[23]. Thus, the mound occupies a strategic position, benefitting from proximity to the river, the fertile plains flanking the river to the north and south, as well as an additional fertile basin to the west.

Stratification

The investigation of the mound led to the identification of seven distinct phases. The earliest stages feature quadrangular structures with lime-plastered floors, constructed in Phases 7 and 6. Radiocarbon data places these phases in the first half of the 7th millennium BCE. Subsequently, apsidal structures emerge in later phases after an unspecified duration. In Phase 5, remains of an apsidal structure were found, built to encompass the lime-plastered structure from Phase 6. Phase 4 displays better-preserved buildings, comprising five apsidal and two quadrangular structures. Radiocarbon and relative chronology date this phase to 6200-6000/5900 BCE. The ensuing Phase 3 suffered from modern agricultural activities due to surface proximity. A rise in the use of painted ceramics, akin to settlements in the Lakes District, places this phase in the first half of the 6th millennium BCE. Phase 2, situated in the northeastern part of the hill, was similarly impacted by modern agricultural activities. Ceramics align this phase with the period 5500-4400 BCE. Following Phase 2, the site was abandoned and ceased to be inhabited. During the 10th-11th centuries CE, corresponding to Phase 1, the hill was used as a burial ground[24] (Fig. 2-3).

Stratigraphy of Ekşi Höyük	
Phases	Dates
1	10th – 11th c. CE
Hiatus	
2	
3	6000-5875 BCE
4	6400/6300-6000 BCE
5	
6	6750-6600/6500 BCE
7	

Figure 2. Stratigraphy of the site

22 İlhan et al. 2020, 547-48.

23 Ceylan 1998, 260, 236-39.

24 Dedeoğlu et al. 2023, 4-6.

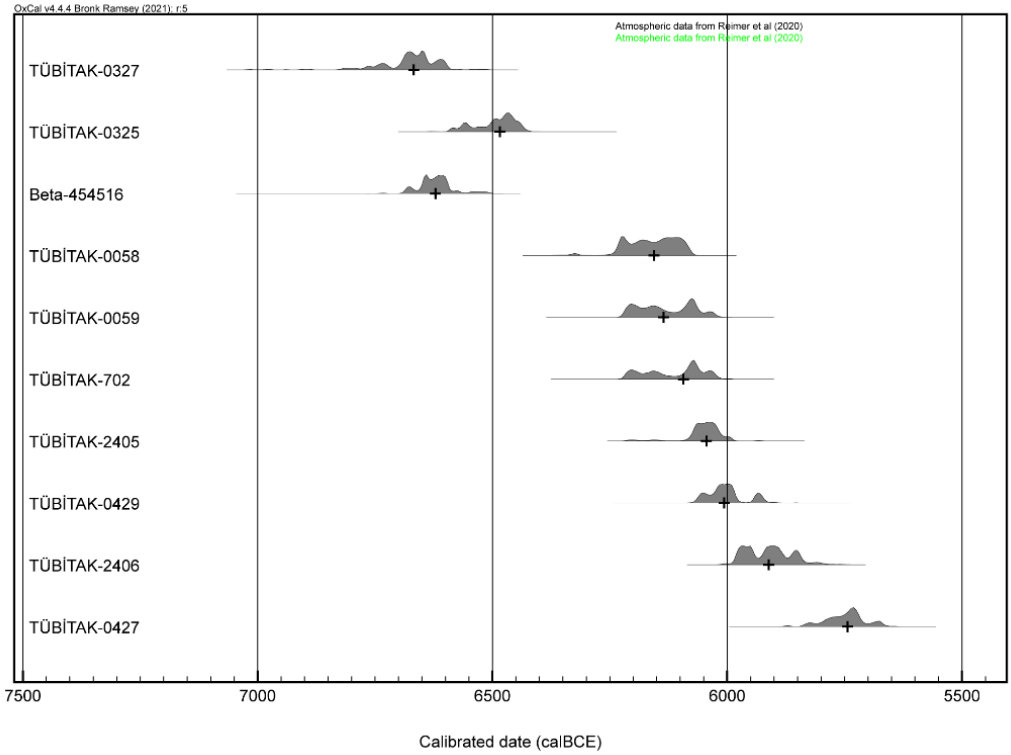

Figure 3. Calibrated radiocarbon dates of Ekşi Höyük

The focus of this article, the data pertaining to weaving activities, corresponds to Phase 4 of the mound. Within this phase, categorized into sub-phases (4a, 4b1, 4b2), a total of seven buildings have been excavated.

Contextual Data

Phase 4 has been excavated across an area of approx. 725 m² within the settlement. A total of five apsidal and two quadrangular structures were identified (Fig. 4). Among these, the southern and western segments of the apsidal structure in the northeast quadrant have sustained considerable damage during later phases, while ongoing investigations are being conducted in its associated area. The buildings from this phase are aligned in the northeast-southwest direction, with all unearthed apsidal structures featuring entrances from the southwest. Certain buildings potentially possess stone pavements either partially or entirely. Interior elements such as hearths or ovens are commonly positioned adjacent to the northwest or southeast walls of the structures. The apsidal buildings offer a functional area ranging between 7-15 m², except for the apsidal structure located in the centre of the site, which experienced use in both the early and late phases of Phase 4. This structure underwent closure and renovation as part of a burial ritual[25]. The quadrangular buildings are situated between the apsidal structures, covering areas ranging from 30 to 40 m². Evidence suggests that these spaces contain hearths/ovens, and mainly used for daily activities.

25 Dedeoğlu – Temür 2022, 5-6.

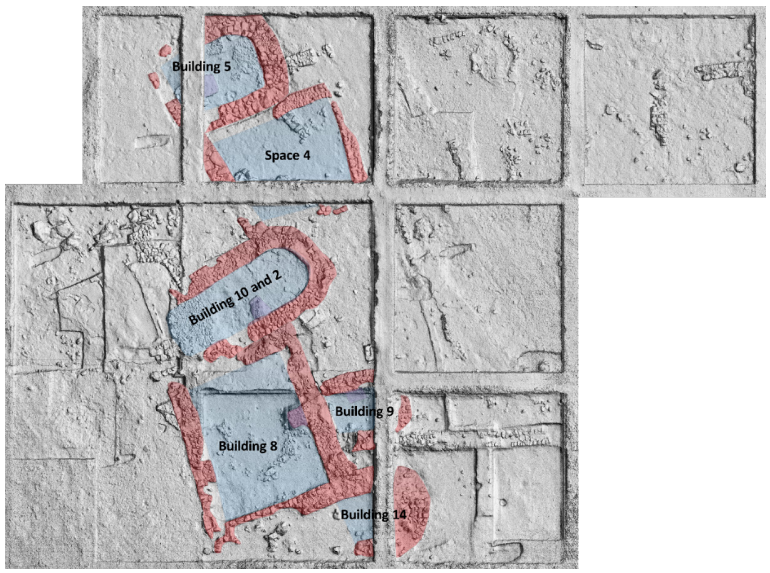

Figure 4. Phase 4 structures mentioned in the article.

Arranged from north to south, the northernmost structure is apsidal Building No. 5. Within this area, a circular spindle whorl was discovered on the floor, with another circular spindle whorl, possibly linked to this context, located about 20-30 cm above the floor level –vertically corresponding to the inner part of the area. The distinct nature of spindle whorls within the mound, categorized as Neolithic and Chalcolithic and characterized by shape and size differences, bolsters the likelihood that this finding pertains to building No. 5. Additionally, a bone tool, potentially utilized as a shuttle, was found in this building (Fig. 5a). The 1 cm deep slit along the back of the tool, measuring around 5 cm in length, seems purposefully crafted for securing the "yarn" to the shuttle, rather than being a natural breakage. Two bone awls, likely associated with weaving, were also recovered from this space. Adjacent to this structure in the south is a quadrangular room, designated as Space No. 4, believed to have been in use during Phase 4. While spindle whorl artifacts were absent from this area, 4 bone awls were discovered. Another apsidal structure (Building No. 10 and 2) abuts the southern wall of this room. The floor of this apsidal structure, initially employed in the early phase of Phase 4, was subsequently buried, with the inner portion being levelled using regularly placed mudbricks for the late phase floor. Positioned centrally within the settlement, larger compared to similar structures, and subject to closure and reuse after a burial rite, this structure holds a distinct significance. Nevertheless, the findings suggest that disparate practices associated with the building may not necessarily reflect its intended use, as the recovered artifacts and architectural elements indicate a domestic function akin to other structures. A multitude of bone, chipped stone, grinding stone tools, and clay objects offer insights into daily activities. The substantial number of spindle whorls found in the early and late phases underscores the significant role of weaving in these activities. The distribution of spindle whorls throughout the building is widespread, excluding the entrance. An awl was also uncovered at the eastern end of the room.

South of Buildings 10 and 2 lies Building 8, with its north wall abutting against this structure. On the eastern wall, just north of the entrance, an oven, evidently employed for firing clay objects, was discovered. A significant number of baked and unbaked sling bullets found in

proximity to the oven clearly indicates its function. It is noteworthy that the kiln was primarily utilized for baking these specific objects. The presence of other clay items is relatively limited, or their association with the kiln remains uncertain. Among the three spherical spindle whorls that were previously fired, one was unearthed in front of this kiln, while the remaining two are situated in the south-eastern segment of the building. Six bone awls were also uncovered within the confines of this structure. East of Building No. 8, another apsidal structure designated as Building No. 9 is located (Fig. 5e). This building must have been constructed and utilized during the late phase of Phase 4, following the end of Building No. 8's usage. This is inferred as the entrance of Building No. 9 is blocked by the eastern wall of Building No. 8. Adjacent to the north wall of this relatively compact building, which endured destruction from a 10th-11th century grave, an oven was exposed. The oven's purpose appears akin to that of the oven in Building No. 8, intended for producing clay objects. Numerous unfired clay items were found on the floor of the building, with traces of white straw mat (Fig. 5c-d) on sections in contact with the floor, suggesting drying purposes. In addition to sling bullets and other clay objects, six unbaked spindle whorls were discovered. Though many spindle whorls are not well-preserved due to their unfired state, the surviving instances exhibit a spherical form. Other pertinent finds related to weaving activities encompass three bone awls.

Figure 5. *In situ* finds from Building No. 9 (e), unbaked spindle whorls with traces of a straw mat (c, d), "weaving shuttle" unearthed in Building No. 5 (a), a needle sample from Phase 4 with traces of a rope (b)

Building No. 14, positioned south of Building No. 8, represents another structure seemingly used in the early phase of Phase 4. While a segment of this building remains unexcavated, the revealed portion yielded six spindle whorls, comprising one biconical and the rest spherical. No bone tools associated with this building were recovered.

Functional and Typological Analysis of Spindle Whorls

During the excavations conducted from 2015 to 2022, a total of 57 Neolithic spindle whorls belonging to Phase 4 were identified (Fig. 6).

Figure 6. Samples of spindle whorls and loom weights from Ekşi Höyük

A key determinant in assessing the potential function of these spindle whorls is their weight. Given their role as weight on the spindle, precise weight holds significant importance[26]. There exists a prevailing notion that spindle whorls below a specific mass are unsuitable for their intended use, with a commonly suggested range falling around 10-12 g[27]. Likewise, a connection is posited between the dimensions and weight of the spindle whorls and the fineness of the resulting thread. Ethnographic and experimental studies have demonstrated a corresponding correlation between smaller dimensions and lighter weight of spindle whorls, and the creation of finer yarn. Heavier spindle whorls, without augmenting diameter to slow rotation, induce yarn stretching and heightened susceptibility to breakage[28]. As a general rule, spindle whorls commonly maintain a diameter surpassing 2 cm[29]. Specifically, spindle whorls from Ekşi Höyük measure 4-4.5 cm in diameter, with hole diameters spanning 0.75-0.80 cm. Weights vary between 35 g and 80 g, with a solitary specimen weighing 140.43 g. Notably, a direct correlation is observed between size and weight of the spindle whorls.

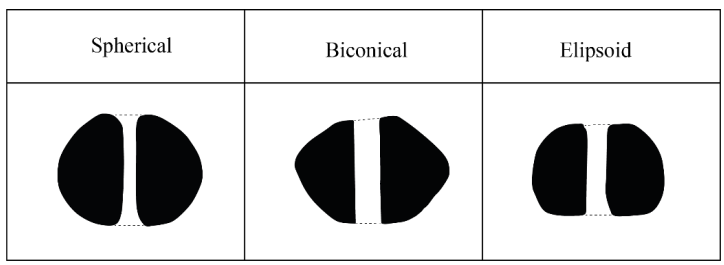

Figure 7. Types of spindle whorls from Phase 4

All of the spindle whorls from Ekşi Höyük are produced from clay, and among the identified samples, three distinct types were recognized: spherical, biconical, and ellipsoid (Fig. 7-8).

26 Rahmstorf 2015, 5.

27 Smith 1992, 685.

28 Loughran – Delahunt 1996, 234, 55.

29 Barber 1991, 51.

Prevalently, the spherical spindle whorls constitute the most abundant category, followed by biconical variants, with ellipsoids representing the least frequent grouping. It is pertinent to acknowledge the occasional challenge in distinguishing between spherical and biconical types. Regarding the composition of the clay employed for crafting spindle whorls, no uniform standards exist. Some specimens feature well-purified clay, while others exhibit inclusions of stones and straw. Surface treatment of the spindle whorls is absent; the external aspect remains unadorned, minimally smoothed.

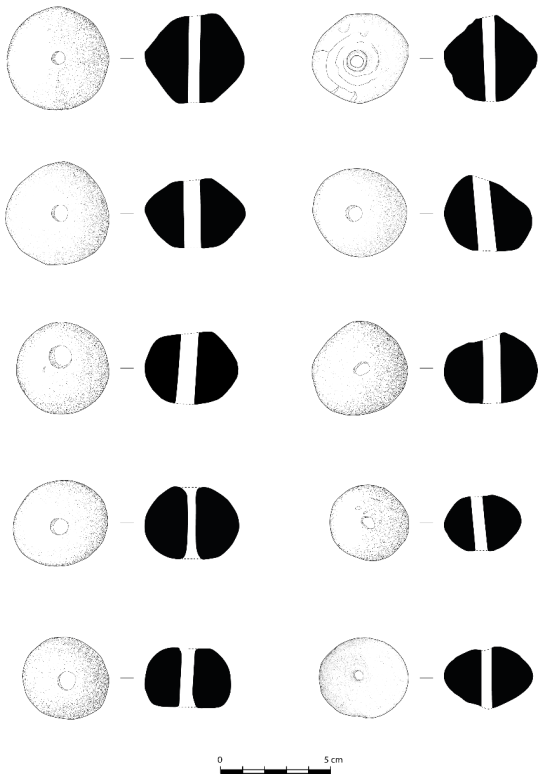

Figure 8. Drawing of spindle whorl samples

Other Finds

In addition to spindle whorls, Ekşi Höyük has yielded other artifacts shedding light on weaving practices. Notably, awls, needles, and bone tools, potentially serving as shuttles, represent pertinent items associated with weaving. These tools are notably concentrated within Phase 4, aligning with the prevalence of spindle whorls. While loom weights are not a prominent find, two cylindrical clay weights have been recovered.

Indirect insights into weaving practices are discernible through clay figurines. The depictions of clothing, likely woven products, are evident in both painted and relief forms on these figurines. A notable specimen from Ekşi Höyük portrays a figurine's upper body adorned with a red and beige cross-patterned garment, indicating the use of dyes in weaving (Fig. 9). Similar depictions of coloured attire on clay figurines are observable at Hacılar Höyük[30]. Notably,

30 Mellaart 1970b, 224, 226 Plate CLXVIa-b, CLXVIIIb.

the most tangible instance of direct attire representation on figurines is the textile remains discovered on a Neolithic figurine from Ulucak Höyük[31].

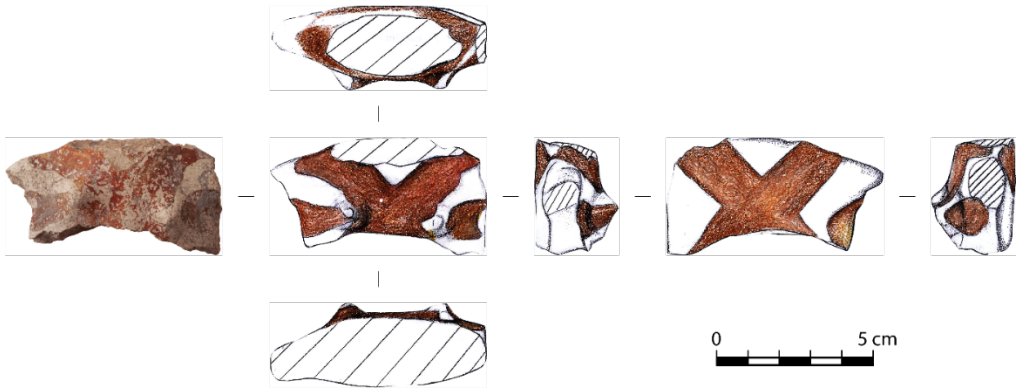

Figure 9. Clay figurine with cloth

Spatial Distribution of Spindle Whorls

The rationale for analysing the distribution map of spindle whorls stems from their direct correlation with weaving activities, distinguishing them from versatile items like awls. Consequently, the coordinate data of spindle whorls from Phase 4 of Ekşi Höyük were integrated into the settlement's digital elevation model (DEM) using GIS software. This analysis revealed into the distribution of spindle whorls across interior and exterior spaces, culminating in the creation of a spindle whorl density map through GIS based spatial analysis tools. The generated maps distinctly illustrate a concentration of spindle whorls within the apsidal structures, particularly evident in those identified as Nos. 2, 10, 9, and 14 in the southern sector (Fig. 10).

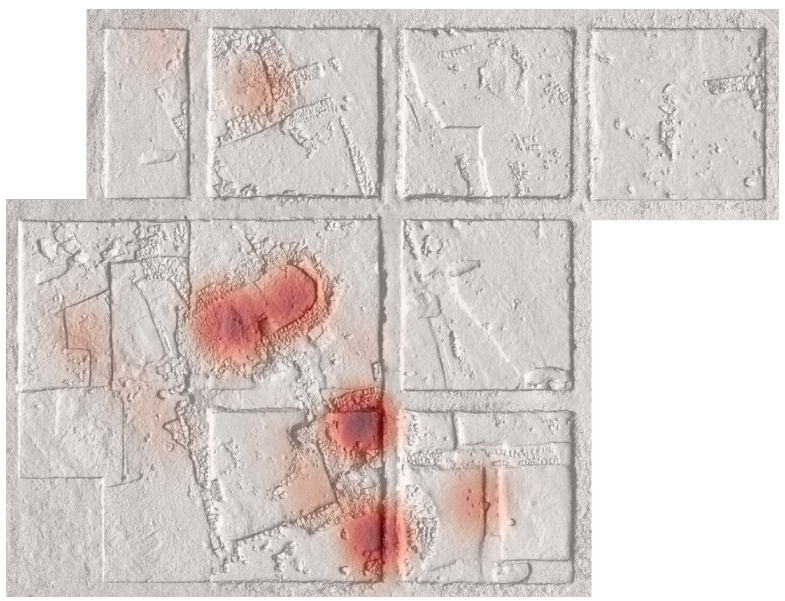

Figure 10. Density map of spindle whorls

31 Çilingiroğlu 2009, 17 Fig. 7.

Among these, it is discernible that Building No. 9 primarily functioned as a production area of clay objects, substantiated by the abundant presence of unbaked and partially finished spindle whorls in proximity to the kiln. A noteworthy discovery in this context is the remnants of a straw mat discovered beneath the spindle whorls in the production phase, adjacent to the kiln. This strongly suggests a practice of drying the spindle whorls before firing, as evident from the straw mat adhering to the unbaked spindle whorls. No analogous finds indicative of this production phase have surfaced in any other buildings thus far. Bone awls found within the same area likely contributed to the spindle whorl production process.

Additional apsidal buildings where spindle whorls were found in similar contexts include Buildings 2, 10, and 14, positioned to the north and south of Building No. 9. It is reasonable to infer that these structures primarily functioned as active spaces for weaving, rather than spindle whorl production. While the northernmost building, Building No. 5, yielded a comparatively lower number of spindle whorls, the presence of two awls and a bone shuttle –probable tools for weaving– signifies that weaving activities were conducted within this household.

Contrastingly, quadrangular buildings display a less concentrated distribution of spindle whorls. For instance, an oven utilized for firing clay objects was exposed in the Building No. 8, yet the arrangement of clay objects unearthed nearby –primarily sling bullets, with one exception– suggests a specific relation to production of these objects. The northeastern corner of the same space revealed an area dedicated to chipped stone production. In this regard, it becomes evident that quadrangular buildings were involved in diverse production activities[32]. However, the production of spindle whorls and weaving activities appear confined to apsidal buildings.

Conclusion

While studies of Neolithic weaving activity are limited, a considerable amount of data exists, particularly within settlements in southwestern Anatolia. Although the number of identified Neolithic settlements in this region remains limited, the available evidence suggests varying degrees of weaving activity, with some settlements showing more intensive engagement. For instance, Ulucak Höyük in the Coastal Aegean region stands out for its pronounced weaving activity compared to neighbouring settlements. A similar pattern is observable in Ekşi Höyük, a Neolithic site situated in Inner West Anatolia. Surrounding settlements within the Lake District, however, offer a limited dataset.

Evidence pertaining to spindle whorl production and weaving at Ekşi Höyük becomes prominent from Phase 4 onwards (after 6200 BCE). Spatial analyses indicate that weaving-related artefacts are distributed across various households. This practice, predominantly conducted within apsidal structures as opposed to communal areas, can be identified as a household activity. The dimensions and weights of the spindle whorls align with expectations for weaving. Nevertheless, the absence of textile remains raises uncertainty about the specific fibres employed in Ekşi Höyük's weaving. Although archaeological evidence indicates a higher prevalence of sheep compared to goats in Phase 4, the differential survival of males and females might imply a focus on dairy products rather than wool for secondary production[33].

32 Dedeoğlu et al. 2019, 5–7.

33 Dedeoğlu et al. 2023, 17.

Textile production in the Neolithic period potentially held both symbolic and practical significance for communities. Instances such as the textile pellet positioned on a skull in a Çatalhöyük burial and the textile residue on a clay figurine from Ulucak Höyük hint at symbolic implications. Similarly, the depiction of figurines in clothing at both Ekşi Höyük and Hacılar suggests a symbolic association with textiles. Throughout subsequent processes, colours, motifs, and their visual representations likely contributed to reinforcing communal identity and affiliation. Whether intentional or unintentional, textiles conveyed social messages through weaving techniques and the application of patterns. Attire and ornamentation seemingly played a vital role in signifying an individual's status as a member of a specific tribe or ethnic group. Ethnographic evidence underscores the existence of distinct regional and ethnic subsets within tribes, each characterized by a unique dress style[34].

Despite the growing body of knowledge on Neolithic textile production, the same level of interest observed in later periods, such as the Bronze Age, is yet to be evident in early weaving. Enhanced comprehension of both the production process and the social dimensions of weaving can be achieved through continued archaeological and archaeometry investigations in this domain.

Writer Contributions / Yazar Katkıları

Planning of the Study/Çalışmanın Tasarlanması	Author/Yazar-1 (50%) - Author/Yazar-2 (50%)
Collecting Data/Veri Toplanması	Author/Yazar-1 (50%) - Author/Yazar-2 (50%)
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Writing the Article/Makalenin Yazımı	Author/Yazar-1 (50%) - Author/Yazar-2 (50%)
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34 Schwarz 1979, 27.

Review

This article has been reviewed by at least two reviewers using a double blind peer review model. A similarity check was performed to confirm that it was free of plagiarism.

Ethical Statement

It is declared that scientific and ethical principles were complied with during the preparation of this study and all the works referred are mentioned in the bibliography.

Complaints

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Use of Artificial Intelligence

No artificial intelligence-based tools or applications were used in the preparation of this study. The entire content of the manuscript was produced by the authors in accordance with scientific research methods and academic ethical principles.

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Değerlendirme

Bu makale en az iki hakem tarafından çift taraflı kör hakemlik modeliyle incelendi. Benzerlik taraması yapılarak intihal içermediği teyit edildi.

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Lisans

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