

Comparative analysis of trunk indicators in children with scoliosis

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Abstract. Anthropometric measurements and subsequent methods for classifying body shapes make it possible to assess, study and predict the characteristics of the course of human diseases. Scoliosis, a lateral curvature of the spine, is a dangerous disease with serious complications, especially for growing children. Disorders that occur in the musculoskeletal system during the period of growth and development of children are dangerous because if not detected in time, they often become irreversible. The purpose of this study was to determine the anthropometric characteristics of the parameters of the upper extremities depending on gender and age characteristics in children aged the first and second periods of childhood.

1 Introduction

Anthropometric measurements and subsequent methods for classifying body shapes make it possible to assess, study and predict the characteristics of the course of human diseases [1, 9]. The growth and development of the human body from the embryonic stage to adulthood is a complex mechanism that occurs under the influence of neurohumoral regulators that control the differentiation, development and maturation of all organs and organisms. The growth parameters of various parts of the human body can be influenced by a wide variety of reasons, which can be divided into genetic and pathological [3, 5, 6, 15, 17, 22, 24].

Scoliosis is one of the most difficult problems of modern orthopedics, since its prevalence among children and adolescents is 5–9%, and currently there is a tendency towards an increase in progressive forms of scoliosis with severe complications [2, 8, 12, 15, 19, 21].

Caring for the younger generation is a priority for every country. Here, raising comprehensively developed children and adolescents is of great importance. This requires a whole range of measures, which also includes reducing the incidence of medical and social diseases, which include scoliosis [7, 10, 15, 20].

A high level of public health is a necessary condition for the successful economic and social development of the country. Achieving positive changes in this direction is associated, first of all, with improving the health of young men and women who make up the labor and intellectual potential of society [4, 11, 12, 18, 23].

The purpose of the study was to study the anthropometric parameters of children with scoliosis and compare these data with the indicators of healthy children.

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2 Materials and methods

260 children aged from 3 to 12 years were examined, 160 of them were healthy children and 100 children with scoliosis. Anthropometric measurements were carried out according to the methodological recommendations of N.H. Shomirzaev, S.A. Ten and I. Tukhtanazarova (1998). The studies were conducted at secondary school No. 2 and boarding school No. 23 in Bukhara for children with scoliosis. The results of an examination of children (40 boys and 60 girls) aged 3-12 years with idiopathic thoracic scoliosis of I and IV degrees according to Chaklin, as well as 160 healthy children (70 boys and 90 girls) of the same age were studied.

3 Research results and discussions

As a result of the research, it was revealed that in 3-year-old boys the distance between the jugular notch of the sternum and the symphysis was on average 33.1 ± 0.28 cm. The length of the body was from 36.31 cm to 55.32 cm, on average it was 51.61 ± 0.38 cm.

In 4-year-old male children, the distance between the jugular notch of the sternum and the symphysis varied from 31.8 cm to 35.7 cm, averaging 34.33 ± 0.35 cm, body length from 36.6 cm to 54.6 cm, on average - 52.58 ± 0.39 cm.

Studies have shown that the body parameters of 5-year-old male children continue to grow in relation to 3 and 4 years of age. The distance between the jugular notch of the sternum and the symphysis varied from 35.9 cm to 39.8 cm, on average 37.88 ± 0.36 cm. Body length from 52 cm to 56.2 cm, on average 53.58 ± 0.39 cm.

The distance between the jugular notch of the sternum and the symphysema in 6-year-old boys ranged from 36.2 cm to 40.3 cm, on average - 38.46 ± 0.42 cm, body length from 51.1 cm to 58.9 cm, on average - 54.67 ± 0.72 cm.

In 7-year-old healthy boys, the distance between the jugular notch of the sternum and the symphysis ranged from 36.25 cm to 44.02 cm, averaging 39.50 ± 0.45 cm, body length from 42.81 cm to 68.30 cm, average - 56.39 ± 1.45 cm. Average breast indicators in healthy male and female children under 12 years of age are shown in Table 1 and 2.

Table 1. Average breast measurements in healthy male children under 12 years of age.

Parameters	Chest height		Transverse chest diameter		Antero-posterior chest diameter	
	M	m	M	m	M	m
Newborn	11,60	0,36	8,49	0,26	9,80	0,27
3	17,20	0,28	9,7	0,12	10,7	0,14
4	15,63	0,57	10,10	0,24	11,15	0,46
5	17,78	0,47	10,66	0,37	12,38	0,38
6	19,98	0,45	11,10	0,37	13,50*	0,23
7	22,00*	0,37	12,40*	0,30	13,49*	0,49
8	22,67*	0,19	13,04	0,48	14,19	0,71
9	23,30*	0,47	13,79*	0,25	15,10	0,27
10	25,99*	0,47	16,01*	0,59	16,50	0,73
11	25,70*	0,27	17,24*	0,60	18,35	1,04
12	26,45*	0,54	18,90*	0,39	19,51*	0,50

Note* - significant differences from the previous age ($P \leq 0.05$)

The body parameters of 8-year-old male children are almost no different from those of 5-year-old boys. The distance between the jugular notch of the sternum and the symphysis varied from 37.52 cm to 43.61 cm, with an average of 40.44 ± 0.75 cm. Body length from 52.35 cm to 65.56 cm, with an average of 58.06 ± 1.08 cm.

During the studies, it was revealed that the distance between the jugular notch of the sternum and the symphysis in 9-year-old male children varied from 40.0 cm to 42.80 cm, averaging 41.50 ± 0.16 cm, body length from 60.2 cm to 61.9 cm.

The research results showed that the distance between the jugular notch of the sternum and the symphysis in 10-year-old male children ranged from 40.84 cm to 44.2 cm, on average $- 42.0 \pm 0.92$ cm, body length on average - 63.9 ± 1.67 cm (from 58.3 cm to 67.2 cm).

We can note that the distance between the jugular notch of the sternum and the symphysis in 11-year-old male children ranged from 42.82 cm to 46.11 cm, on average it was 44.73 ± 0.47 , body length from 59.0 cm to 68.20 cm, on average - 65.0 ± 0.35 cm.

As a result of the research, it was found that the distance between the jugular notch of the sternum and the symphysis in 12-year-old male children varied from 43.3 cm to 50.2 cm with an average of 45.08 ± 1.29 , body length from 62.65 cm to 69.01 cm, average 67.85 ± 1.19 cm.

As a result of the research, it was revealed that in 3-year-old girls the distance between the jugular notch of the sternum and the symphysis varied from 31.18 cm to 34.42 cm, on average - 33.27 ± 0.66 cm. Body length from 47.3 cm to 52.53 cm, the average was 51.1 ± 0.92 cm.

In 4-year-old female children, the distance between the jugular notch of the sternum and the symphysis was in the range from 32.51 cm to 35.8 cm, averaging 34.58 ± 0.36 cm, body length from 48.45 cm to 53.23 cm, in on average was 52.78 ± 0.39 cm.

The parameters of the body are not particularly different from those of 3- and 4-year-old girls. The distance between the jugular notch of the sternum and the symphysema in 5-year-old female children varied from 33.0 cm to 37.8 cm, averaging 36.27 ± 0.44 cm, body length from 50.0 cm to 55.2 cm, the average was 53.49 ± 0.39 cm.

The research results showed that the distance between the jugular notch of the sternum and the symphysis in 6-year-old girls ranged from 34.1 cm to 39.7 cm, on average - 37.17 ± 0.52 cm, body length from 52.5 cm to 58.9 cm, the average was 55.15 ± 0.59 cm.

Also, the distance between the jugular notch of the sternum and the symphysema in 7-year-old girls was on average 38.4 ± 0.67 cm (from 33.2 cm to 42.4 cm). The body length ranged from 23.5 cm to 61.2 cm, with an average of 56.0 ± 2.75 cm.

Table 2. Average breast measurements in healthy female children under 12 years of age.

Parameters	Chest height		Transverse chest diameter		Antero-posterior chest diameter	
	M	M	M	m	M	m
Newborn	11,00	0,49	8,49	0,29	9,98	0,30
3	16,60	0,47	9,67	0,34	10,66	0,38
4	17,50	0,35	10,10	0,37	11,15	0,37
5	18,80*	0,35	11,64	0,41	12,88	0,22
6	19,72*	0,34	11,90	0,35	13,41	0,34
7	21,20	0,32	12,70	0,30	14,00	0,36
8	22,08	0,27	13,85*	0,43	14,40*	0,38
9	22,80	0,34	14,40*	0,33	15,20*	0,28

Continuation of Table 2.

10	23,70*	0,32	15,21*	0,39	16,70*	0,34
11	24,65*	0,36	17,15*	0,35	18,37*	0,32
12	25,00	0,32	18,87*	0,36	19,00*	0,32

Note* - significant differences from the previous age ($P \leq 0.05$)

Studies have shown that in 8-year-old female children there is a significant increase in the parameters of the torso and chest in relation to 6- and 7-year-olds ($P \geq 0.05$). The distance between the jugular notch of the sternum and the symphysis varied from 34.2 cm to 42.2 cm, with an average of 38.75 ± 0.37 cm, the body length from 46.0 cm to 56.2 cm, with an average of 59.9 ± 0.64 cm.

I would like to note that the distance between the jugular notch of the sternum and the symphysis in 9-year-old female children ranged from 35.0 cm to 44.4 cm, averaging 39.7 ± 0.57 cm, body length from 41.2 cm up to 61.1 cm, the average was 61.3 ± 0.99 cm.

Studies have shown that the distance between the jugular notch of the sternum and the symphysis in 10-year-old girls averaged 42.5 ± 0.84 cm (from 41.0 cm to 50.1 cm), the body length ranged from 52.7 cm to 68.2 cm, the average was 62.4 ± 1.43 cm.

As a result of the research, it was found that the distance between the jugular notch of the sternum and the symphysis in 11-year-old healthy female children ranged from 20.3 cm to 37.4 cm, averaging 44.6 ± 0.97 cm, the body length from 58.3 cm to 72.3 cm.

The research results showed that the distance between the jugular notch of the sternum and the symphysis in 12-year-old girls varied from 35.0 cm to 46.8 cm, averaging 45.5 ± 0.73 cm, body length from 28.2 cm to 58.6 cm, the average was 65.6 ± 1.88 cm.

In boys, the highest rate of increase in height between the jugular notch of the sternum and the symphysis is observed in the first period of childhood 5 (16.3%), and in the second period - 8 (4.69) and 11 years (4.79%), and the lowest - in the first period of childhood at 6 (1.49%), and in the second period at 9 years (0.13%). The highest rate of increase in body length is observed in the first period of childhood 7 (3.05%) and in the second period of 10 years (5.10%), and the lowest - in 4 years (first period of childhood) (1.21%) and 11 years (second period of childhood) (2.6%).

The highest growth rate between the distance of the jugular notch of the sternum and symphysemas in girls is observed in the first period of childhood at 5 (4.94%), in the second period at 10 years (6.58%), and the smallest - in the first period of childhood at 6 (2.33%), in the second period of 8 years (0.92%). The highest rate of increase in body length is observed at 4 (3.04) and 6 (3.01) (I period of childhood) and 8 (II period of childhood) years (6.18%), and the lowest - at 5 (1.47%) (I period of childhood) and 12 years (II period of childhood) (1.21%).

An increase in chest height in boys under 12 years of age was found to be 2.28 times, and in girls - 2.16 times. In the first period of childhood, the highest growth rate for boys is observed at 6 (4.95%), for girls at 5 (6.87) years, and in the second period of childhood for boys at 10 years (5.74%), for girls at 10 (3.79) and 11 (3.85) ages. The lowest growth rate for boys is at 4 (I period of childhood) (1.12%) and 11 years (2.58%), and for girls - at 6 (II period of childhood) (4.7%) and 12 years (1.39%).

As a result of the research, it was revealed that in 3-year-old boys with changes in posture due to scoliosis, the distance between the jugular notch of the sternum and the symphysis ranged from 31.8 cm to 35.0 cm, on average - 32.99 ± 0.35 cm, body length from 47.3 cm to 55.3 cm, the average was 51.79 ± 0.46 cm.

The average breast measurements of male and female children under 12 years of age with scoliosis are described in Table 3-4.

The distance between the jugular notch of the sternum and the symphysema in 4-year-old male children varied from 33.9 cm to 35.8 cm, on average - 33.6 ± 0.64 cm, body length from 48.5 cm to 54.6 cm, on average - 52 ± 0.12 cm.

In 5-year-old male children, slight but significant increases in size were noted in relation to 3- and 4-year-old male children). The distance between the jugular notch of the sternum and the symphysis ranged from 36.3 cm to 39.8 cm, on average was 37.1 ± 0.42 cm, body length from 49.5 cm to 56.2 cm, on average - 52.7 ± 0.06 cm.

We can note that the distance between the jugular notch of the sternum and the symphysis in 6-year-old boys ranged from 36.5 cm to 39.7 cm, on average - 37.84 ± 0.85 cm, body length from 50.9 cm to 56.9 cm, average 53.8 ± 0.55 cm.

As a result of the research, it was found that the distance between the jugular notch of the sternum and the symphysis in 7-year-old healthy male children ranges from 35.3 cm to 42.5 cm, averaging 39.5 ± 0.54 cm, body length from 47.2 cm to 57.5 cm, average 56.39 ± 0.64 cm.

Studies have shown that the distance between the jugular notch of the sternum and the symphysis in 8-year-old male children continues to grow and ranged from 38.2 cm to 44.2 cm, averaging 41.44 ± 0.37 cm. The length of the body was in the range from 46.0 cm to 56.2 cm, average - 58.06 ± 0.94 cm.

The distance between the jugular notch of the sternum and the symphysis in 9-year-old male children varied from 36 cm to 43.3 cm, averaging 41.5 ± 0.67 cm, body length from 48.5 cm to 65.0 cm, on average - 60.1 ± 1.52 cm.

The research results showed that the distance between the jugular notch of the sternum and the symphysis in 10-year-old male children ranged from 21.1 cm to 56.3 cm, with an average of 42.6 ± 3.24 cm. The body length ranged from 51 cm up to 62.2 cm, on average - 63.3 ± 1.01 cm.

Table 3. Average breast measurements of male children under 12 years of age with scoliosis.

Parameters	Chest height		Transverse chest diameter		Antero-posterior chest diameter	
	M	m	M	m	M	m
Newborn	11,60	0,36	8,49	0,26	9,80	0,27
3	16,70	0,47	9,52	0,29	10,50	0,33
4	16,89	0,49	9,98	0,25	10,90	0,42
5	17,58	0,60	10,30	0,26	11,62	0,57
6	18,50*	0,43	10,79	0,26	12,01*	0,33
7	19,41*	0,40	11,21*	0,33	13,01	0,35
8	20,30*	0,67	12,01	0,28	13,69	0,43
9	21,11*	0,67	12,60*	0,34	14,70	0,49
10	22,40*	0,41	13,00*	0,46	15,20	0,35
11	22,99*	0,43	14,21*	0,33	15,89	0,45
12	23,80*	0,44	15,60*	0,37	16,30*	0,55

Note* - significant differences from the previous age ($P \leq 0.05$)

We can also note that the distance between the jugular notch of the sternum and the symphysis in 11-year-old male children ranged from 30.8 cm to 39 cm, on average it was 44.73 ± 0.47 cm, the length of the body was from 54.0 cm to 66.4 cm, on average - 65.0 cm.

As a result of the research, it was found that the distance between the jugular notch of the sternum and the symphysis in 12-year-old male children varied from 39.0 cm to 50.0 cm, with an average of 45.6 ± 1.01 cm, body length from 67.2 cm to 76.0 cm, average - 67.85 ± 0.81 cm.

As a result of the research, it was revealed that in 3-year-old girls the distance between the jugular notch of the sternum and the symphysis is from 31.8 cm to 33.8 cm, on average - 33.0 ± 0.12 cm, body length from 47.3 cm to 50.8 cm, in the average was 50.60 ± 0.22 cm.

The indicators of 4-year-old female children practically did not differ from the data of 3-year-olds ($P > 0.05$). The distance between the jugular notch of the sternum and the symphysis was in the range from 35.9 cm to 39.8 cm, with an average of 34.2 ± 0.36 cm, the length of the body was from 52.0 cm to 56.2 cm, with an average of - 51.1 ± 0.39 cm.

In 5-year-old female children, the distance between the jugular notch of the sternum and the symphysis varied from 35.0 cm to 38.8 cm, averaging 35.0 ± 0.44 cm, body length from 52.0 cm to 56.2 cm, on average was 54.2 ± 0.39 cm.

Almost the same results were obtained in 6-year-old girls, in whom the distance between the jugular notch of the sternum and the symphysis was on average 35.7 ± 0.42 cm (from 35.7 cm to 40.3 cm). body length - 53.81 ± 0.72 cm (from 51.1 cm to 58.9 cm).

Also, the distance between the jugular notch of the sternum and the symphysis in 7-year-old girls varied from 35.3 cm to 41.6 cm, averaging 36.01 ± 0.39 cm, body length from 47.7 cm to 56.3 cm, in on average was 54.30 ± 0.53 cm.

Studies have shown that the distance between the jugular notch of the sternum and the symphysema in 8-year-old female children varied from 38.2 cm to 42.2 cm, with an average of 37.6 ± 0.37 cm, body length from 46.0 cm to 56.2 cm, with an average of 57.6 ± 0.94 cm.

Table 4. Average breast measurements of female children under 12 years of age with scoliosis.

Parameters	Chest height		Transverse chest diameter		Antero-posterior chest diameter	
	M	m	M	m	M	m
Newborn	11,60	0,36	8,49	0,26	9,80	0,27
3	16,50	0,65	9,68	0,44	10,68	0,49
4	16,90	0,53	10,48	0,28	11,42	0,46
5	17,61*	0,42	11,00	0,34	12,01	0,41
6	18,63*	0,47	11,31	0,44	12,50	0,30
7	20,30	0,49	11,90*	0,32	13,01	0,30
8	21,41*	0,50	12,11*	0,37	13,30	0,33
9	21,60*	0,49	12,60*	0,31	13,90	0,50
10	22,40*	0,38	13,20*	0,30	14,20	0,46
11	23,01*	0,48	14,53*	0,32	15,29	0,52
12	23,80*	0,56	15,60*	0,32	16,20*	0,44

Note* - significant differences from the previous age ($P \leq 0.05$)

We can note that the distance between the jugular notch of the sternum and the symphysis in 9-year-old female children ranged from 30.0 cm to 44.4 cm, with an average of 38.6 ± 1.32 cm, the body length from 41.2 cm to 61.1 cm, with an average of 58.2 ± 1.83 cm.

Studies have shown that the distance between the jugular notch of the sternum and the symphysema in 10-year-old girls averaged 40.0 ± 1.27 cm (from 37.4 cm to 51.2 cm). Body length ranged from 55.1 cm to 64.9 cm, with an average of 59.8 ± 1.43 cm.

As a result of the research, it was found that the distance between the jugular notch of the sternum and the symphysis in 11-year-old healthy female children ranges from 20.03 cm to 37.44 cm, averaging 44.6 ± 0.97 cm. Body length from 58.33 cm to 72.23 cm, the average was 64.8 ± 0.80 cm.

The research results showed that the distance between the jugular notch of the sternum and the symphysis in 12-year-old girls varied from 29.3 cm to 41.3 cm, averaging 45.5 ± 1.10 cm, body length from 27.9 cm to 56.65 cm, the average was 65.6 ± 0.65 cm.

As a result, the study revealed that the distance between the jugular notch of the sternum and the symphysis in children with scoliosis in postnatal ontogenesis up to 12 years of age increases faster than in children with scoliosis. In boys, the distance between the jugular notch of the sternum and the symphysis from a newborn to 12 years increases by 2.26 times, in girls - 2.31 times; and the length of the body is 2.06 times for boys, and 2.02 times for girls.

In the first period of childhood in boys with scoliosis, the highest rate of increase in the distance between the jugular notch of the sternum and the symphysema is observed at 5 (9.4%), and the smallest at 7 (1.2%) years. In the second period of childhood, the greatest growth rate is at 8 years (4.1%), and the smallest at 9 (0.8%). The highest rate of increase in body length is observed in the first period of childhood at 6 (2.0%) and II in the second 10 years (7.8%), and the smallest - in 7 (0.7%) and 9 years (1.1%). The highest growth rate is observed in body length at 6 (2.04%) and 10 years (7.6%), and the lowest at 7 (.7%) and 9 (1.1%).

As the literature data of Wang Wei-jun et al (2012) show, the weight and age of children aged 14 years and older as cross-sectional indicators. Our study is not consistent with these data. This is explained by the fact that children with scoliosis experience weight loss already in the first years of childhood [13, 14].

4 Conclusions

Analysis of the characteristics of the anatomical and anthropometric parameters of the vertebrae in children with idiopathic right- and left-sided scoliosis made it possible to identify a positive correlation between the size of the scoliotic curve and the physical development of children. With right-sided scoliosis, unilateral shortening of the upper and lower limbs on the right side was observed in children of both sexes of all age groups; the severity of these changes was determined by the individual characteristics of the child and the presence of concomitant pathologies and complications of the main diagnosis. In left-sided scoliosis, similar changes were observed on the left side.

References

1. N. P. Alimova, International Engineering Journal for Research & Development **5**, 2 (2020)
2. N. P. Alimova, International Research Development and Scientific Excellence in Academic Life, 85-86 (2021)
3. S. M. Kamalova, "Changes in the parameters of the physical development of 9-year old children with scoliosis", in *Archive of Conferences* (2021)
4. Sh. M. Kamalova, E. A. Kharibova, Sh. J. Teshaev, American Journal of Medicine and Medical Sciences **11(7)**, 542-546 (2021)

5. S. M. Kamalova, S. J. Teshae, American Journal of Medicine and Medical Sciences **10(9)**, 725-727 (2020)
6. K. S. Muzaffarova, *Academicia: an international multidisciplinary research journal* **11(2)**, 359-361 (2021)
7. K. S. Muzaffarova, X. E. Aleksandrovna, T. S. Jumayevich, Turkish Online Journal of Qualitative Inquiry **12(7)** (2021)
8. K. S. Muzafarova, S. Joraboy, *Miasto Przyszłości* **24**, 101-103 (2022)
9. K. S. Muzafarova, *Research Journal of Trauma and Disability Studies* **1(9)**, 119-122 (2022)
10. K. S. Muzafarova, B. R. Radjabovich, S. Joraboy, *Central Asian journal of medical and natural sciences* **3(3)**, 144-147 (2022)
11. K. S. Muzafarova, *Horizon: Journal of Humanity and Artificial Intelligence* **2(4)**, 148-153 (2023)
12. K. S. Muzaffarova, *Scholastic: Journal of Natural and Medical Education* **2(4)**, 124-128 (2023)
13. K. S. Muzaffarova, B. R. Radjabovich, A. N. Pulatovna, *Open Access Repository* **4(3)**, 1211-1215 (2023)
14. K. S. Muzaffarova, M. F. Ruzimurodovna, K. L. Rizoyevna, *Journal of Advanced Zoology* **44(S5)**, 2177-2183 (2023)
15. J. J. Bakhrinov, S. J. Teshae, M. S. Shodieva, *International Journal of Pharmaceutical Research* **13(1)**, 683-686 (2020)
16. S. S. Davlatov, B. Z. Khamdamov, Sh. J. Teshae, *Journal of Natural Remedies* **22(1(2))**, 147-156 (2021)
17. S. Davlatov, Sh. Teshayev, X. Fayziev, N. Khamidova, *International Journal of Pharmaceutical Research* **13**, 970-976 (2020)
18. O. E. Idiev, S. Z. Teshae, *Journal of Pharmaceutical Negative Results* **13** (2022)
19. B. Z. Khamdamov, S. S. Davlatov, Sh. J. Teshae, *Journal of Natural Remedies* **22(1(2))**, 147-156 (2021)
20. S. J. Teshae, R. R. Baymuradov, N. K. Khamidova, D. A. Khasanova, *International Journal of Pharmaceutical Research* **12(3)** (2020)
21. S. Zh. Teshae, S. V. Yanchenko, A. V. Malyshev, L. M. Petrosyan, S. Sh. Ramazonova, *Oftalmologiya* **20(4)**, 772-779 (2023)
22. Sh. Zh. Teshae, S. V. Yanchenko, A. V. Malyshev, R. R. Boboeva, G. B. Juraeva, *Oftalmologiya* **20(4)**, 780-786 (2023)
23. S. J. Teshayev, D. K. Khudoyberdiyev, S. S. Davlatov, *International Journal of Pharmaceutical Research* **13(1)**, 679-682 (2021)
24. F. Oripov, S. Blinova, T. Dekhkanov, S. Davlatov, *International Journal of Pharmaceutical Research* **13(1)**, 299-301 (2020)