

## **The effects of the COVID-19 pandemic on do-it-yourself (DIY) behavior**

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### **ABSTRACT**

The COVID-19 pandemic had an immense effect on global business. Stay-at-home orders were issued across the US. This caused the shuttering of all non-essential businesses. Customers had to figure out how to access services, such as lawn service, grooming, home improvement and fitness, when no providers were available. Most customers had no alternative but to do it themselves. This is known as do-it-yourself (DIY) behavior. This study was conducted during April 2020. Data were collected related to changes in DIY behavior pre-pandemic and post-pandemic. Findings indicate that DIY behavior is resilient. Those who took on these services prior to the pandemic expected to continue to do them afterwards. Those who did not undertake these services prior to the pandemic, expected to continue to patronize service providers after the end of the pandemic. Respondents who expected to continue to DIY behavior post-pandemic were found to do so because they were confident in their own ability, found it rewarding, and recognized the cost differential in doing services themselves. Interestingly, perceptions of safety from not being around others was not found to be a reason for continuing DIY behavior post-pandemic. The findings of the study add to the body of knowledge in the increasingly important DIY field and provide key insight for services marketers.

Keywords: COVID-19, pandemic, do-it-yourself, DIY, safety, services, services marketing

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## INTRODUCTION

In early 2020, the world literally shut down. The COVID-19 pandemic, caused by the coronavirus SARS-CoV-2, first emerged in Wuhan, China in December 2019. In early 2020, the virus quickly spread across the globe causing major outbreaks. In February 2020, the World Health Organization (WHO) declared the outbreak a public health emergency of international concern. Governments implemented travel restrictions and social distancing measures to slow the spread of the virus. By March 2020, more drastic measures became increasingly common such as quarantines, mask mandates, and complete lockdowns. In the US, only essential businesses, such as healthcare and grocery businesses, remained open. A majority of employees either lost their jobs or were working remotely from their homes. They had no access to the services on which they had become dependent including hair and beauty, pet care, landscaping, fitness, home-based repairs and maintenance, automotive maintenance, and meal preparation. Individuals found themselves having to take on these duties and/or learn new skills because they had no alternative.

This formed the basis of this study. Which services did individuals take on during the pandemic? Did they become more competent at doing the service themselves? Did they become more confident? Would they expect that these behaviors would continue after the pandemic ended? What impact would this have on service providers, in the long run, if potential customers no longer needed them?

## LITERATURE REVIEW

Practically, do-it-yourself (DIY) behavior is a self-motivated activity in which an individual undertakes a task or project without the assistance of a professional or expert. DIY is more formally defined as “activities in which individuals engage raw and semi-raw materials and component parts to produce, transform, or reconstruct material possessions, including those drawn from the natural environment” (Wolf & McQuitty, 2013, p. 195). This behavior has become increasingly popular in recent years, as a result of the growth of social media platforms and online communities that share ideas and resources on DIY projects. This literature review explores the research on DIY behavior, including its benefits, motivations, and the impact of social media on its popularity.

### Benefits of DIY Behavior

Research has shown that engaging in DIY behavior can have numerous benefits for individuals, including a sense of accomplishment, increased self-esteem, and improved well-being (Scholl, 2016). DIY activities can also provide opportunities for learning and skill-building, which can lead to increased confidence and a greater sense of control over one's environment (Van der Horst & Ryan, 2015). Additionally, DIY behavior can be a cost-effective way of completing tasks or projects that may otherwise require professional assistance.

### Motivations for DIY Behavior

Several studies have explored the motivations behind DIY behavior. One common motivation is the desire for creative expression and the ability to customize one's environment to reflect their personality and preferences (Knox & Ozanne, 2016). Other motivations include the

satisfaction of completing a task independently, the challenge of learning new skills, and the potential cost savings associated with DIY projects (Lindgren & Rapp, 2015).

### **Impact of Social Media on DIY Behavior**

The rise of social media platforms has had a significant impact on the popularity of DIY behavior. Social media provides a platform for individuals to share ideas, connect with like-minded individuals, and access resources and tutorials on a wide range of DIY projects (Schrock & Boyd, 2015). Social media has also made it easier for individuals to document and share their own DIY projects, which can inspire and motivate others to engage in similar behavior.

### **Potential Drawbacks of DIY Behavior**

While DIY behavior can have numerous benefits, there are also potential drawbacks to consider. DIY projects can be time-consuming and require significant effort, which can be a barrier for individuals with limited free time or resources (Lindgren & Rapp, 2015). Additionally, DIY projects can sometimes be unsafe if proper precautions are not taken, which can lead to injury or property damage (Schrock & Boyd, 2015).

### **Conclusion**

DIY behavior has become increasingly popular in recent years due to its numerous benefits, including a sense of accomplishment, improved well-being, and cost savings. Social media has played a significant role in the popularity of DIY behavior, providing a platform for individuals to connect and share ideas and resources. While there are potential drawbacks to consider, the benefits of DIY behavior make it a worthwhile activity for individuals looking to express their creativity, learn new skills, and take control over their environment.

### **METHODOLOGY**

Data were collected in early Spring 2020 just as the most rigid COVID-19 movement restrictions were being lifted in the US. A questionnaire was developed based on prior research in the DIY studies. A panel of 154 subjects was provided by SurveyMonkey Audience. The panel was developed to ensure representativeness across a variety of socio-demographic variables including gender, income, educational level of attainment, location, employment, age, and race (See Figure 1, Appendix A). An electronic survey was sent to panel members until the required number of subjects was achieved (154).

One of the goals of the study was to determine evaluations of DIY behavior prior to the pandemic, during the pandemic, and expectations of continuing such behaviors once the pandemic restrictions were lifted. This information was captured by the following questions (using five-point, semantic differential scales from “strongly disagree” to “strongly agree”; providing interval-level data):

“In 2019, I considered myself a “do-it-yourselfer.” That is, someone who does things myself rather than paying others for services.”

“As of April 2020, I consider myself a “do-it-yourselfer.”

“Overall, after the pandemic is over, I am more likely to do things on my own rather than pay someone else to do it for me.”

A series of questions were also developed to understand the type of DIY activities participants engaged in. These included exercise/fitness, haircutting/personal grooming, housecleaning, yardwork, auto maintenance, home improvement, meal preparation, and pet care. These categories were developed from prior DIY research. These questions were administered in relation to the whether subjects were doing the activities during the pandemic and whether they expected to continue to engage in them after the end of the pandemic restrictions.

Finally, a series of questions were developed to understand the underlying reasons for continuing DIY behavior after the pandemic. These included feeling more confident in one's own ability, realizing the cost of paying for services is too high, the rewarding nature of doing things on your own, and the safety of doing things yourself and avoiding being around others.

## DATA ANALYSIS

An overview of the socio-demographic composition of the sample indicates that it is slightly more female (58.4%), about 43% college educated, more unemployed (61.7%; may be an artifact of the pandemic effects since data was collected in April 2020), primarily 25-44 years old, and primarily white (67.5%). Interesting, the income level of the sample is primarily below \$60,000 per year and over \$90,000 (See Table 1, Appendix A).

An analysis of the two series of scales related to the types of DIY activities performed by subjects' (exercise, haircutting, housecleaning, etc.; both during the pandemic and expectations of continuation following the end of the restrictions) indicates that there is strong internal consistency (See Table 2, Appendix A). The Cronbach Alpha for the scale related to the set of activities the subjects performed during the pandemic is .76. The Cronbach Alpha for the scale related to the set of activities the subjects expected to perform after the pandemic is .79. A generally-acceptable criterion of a minimum of .70 is required to determine the unidimensional nature of a series of scales (Green & Yang, 2009). This also means that the subjects in this study were more likely to exhibit a general DIY behavior across a variety of tasks (at least those captured in the present study) rather than just a few tasks. This is a generalized DIY orientation.

Did subjects' DIY behavior change during the pandemic since services were not readily available? In order to evaluate this research question, a Paired Sample T-Test was conducted. The two questions about whether a subject considered themselves a “do-it-yourselfer” before the pandemic and after the pandemic were asked of the same subject. This means the response to the questions were not independent. The difference between the means of these two questions was found to be not statistically different (two-sided,  $p$ -value = .79). This indicates that either DIY behavior pre-pandemic would continue after the pandemic or that any change in DIY behavior during the pandemic was fleeting and subjects would revert to their prior behavior post-pandemic.

Subjects were asked a series of questions related to the rationale for continuing DIY behavior following the end of the pandemic (“Overall, after the pandemic is over, I am more likely to do things on my own rather than pay someone to do it for me”). These included “I feel more confident in my own ability,” “I realize I am over-paying for services,” “It is just rewarding

to do things for myself,” and “It is safer to stay at home more instead of being around so many people.” Which of these reasons were important in future DIY behavior? In order to answer this research question, multiple linear regression analysis was used (See Table 4, Appendix A). The overall model was significant at the 0.1% level. The R-squared statistic was .53 indicating that the independent variables captured 53% of the variation in the dependent variable. The “I am confident” and “I am over paying” variables were both individually significant in the model (at .001). The “It is rewarding” variable was significant at the .074 level. The “Safety” variable was not significant. This was interesting given the data were collected in the middle of the pandemic when fear about the COVID-19 was at its highest. A regression analysis controlling for the socio-demographic variables did not improve the model significantly.

## DISCUSSION

This study set out to understand how the COVID-19 pandemic affected do-it-yourself behavior. The findings contribute to the growing body of knowledge in the theoretical construct. Subjects appear to not be daunted by the dangers of the pandemic. Expectations of DIY behavior post-pandemic were little changed from pre-pandemic levels (see t-test results). Post-pandemic DIY behavior was expected to be driven by a feeling of being more confident in DIY abilities, cost savings, and the rewarding feeling one gets by doing things on their own. Interesting, a sense of safety by avoiding others was not a statistically significant variable in the model. Perhaps the overwhelming weight of the pandemic was beginning to wear on the subjects and safety was something they were willing to compromise on if they could get back to their original way of life.

The results of the study have a significant managerial impact in several ways. It appears that participants in the study were “do-it-yourselfers” in a broad category of services. If service providers hope to attract this market segment, they are going to have to combat the reasons people do these things on their own in their marketing strategies. Pricing differentials need to be addressed. Do-it-yourselfers perceive the difference between what they pay someone for a service and what it costs them to do it themselves is significant. They also find it rewarding to do services themselves. Perhaps service providers can develop marketing strategies where they involve customers in the delivery of a service at a reduced price. This would provide the customer with the rewarding feeling of doing some of the service themselves while paying a reduced fee.

**REFERENCES**

- Green, S. B., & Yang, Y. (2009). Commentary on coefficient alpha: A cautionary tale. *Psychometrika*, 74(1), 121–135.
- Knox, K., & Ozanne, L. (2016). The role of home-made and home-made-looking products in consumer identity projects and the moderating impact of consumers' self-view. *Journal of Consumer Research*, 43(1), 139-158.
- Lindgren, S., & Rapp, A. (2015). DIY or DIE: How new technologies enable user innovation. *International Journal of Innovation Management*, 19(3), 1-23.
- Scholl, J. (2016). Self-expression and well-being: The mediating role of self-esteem and self-efficacy. *The Journal of Positive Psychology*, 11(6), 717-728.
- Schrock, A.R., & Boyd, L.J. (2015). Developing a measure of social media use in a do-it-yourself (DIY) community. *Computers*
- Wolf, M. & McQuitty, S. (2013). Circumventing traditional markets: An empirical study of marketplace motivations and outcomes of consumers' DIY behaviors. *Journal of Marketing Theory and Practice*, 21, 195–209.

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**APPENDIX A****Table 1*****Socio-demographic Characteristics of Participants***

	<i>n</i>	<i>%</i>
Gender		
Female	90	58.4
Male	64	42.6
Highest educational level		
4-Year Degree	38	24.7
Graduate Degree	27	17.5
Other	89	57.8
Employment		
Unemployed	95	61.7
Employed	59	38.3
Age		
Under 18	2	1.3
18-24	23	14.9
25-34	46	29.9
34-44	31	20.1
45-54	30	19.5
55-64	17	11.0

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65 +	5	3.2
Race		
White	104	67.5
Black	17	11.0
Hispanic	19	12.3
Asian	11	7.1
Other	3	1.9
Income		
\$0 - \$29,999	51	33.1
\$30,000 - \$59,999	38	24.7
\$60,000 - \$89,999	29	18.8
\$90,000 +	36	23.4

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*Note.*  $N = 154$



**Table 2***Descriptive Statistics*

	N	Minimum	Maximum	Mean	Std. Deviation
In 2019, I considered myself a "do-it-yourselfer." That is, someone who does things myself rather than paying others for services.	154	1	5	3.59	1.219
As of April 2020, I consider myself a "do-it-yourselfer."	154	1	5	3.63	1.193
Exercise/Fitness	154	1	5	3.55	1.166
Haircutting/Personal Grooming	154	1	5	3.44	1.247
Housecleaning	154	1	5	4.10	1.011
Yardwork	154	1	5	3.31	1.286
Auto maintenance (repairs, washing, etc.)	154	1	5	2.86	1.274
Home improvement projects (remodeling, repairs, etc.)	154	1	5	3.27	1.210
Meal preparation at home	154	1	5	4.06	1.030
Pet care (walking, grooming, etc.)	154	1	5	3.47	1.206
Exercise/fitness	154	0	5	3.73	1.334
Haircutting/personal grooming	154	1	5	3.31	1.402
Housecleaning	154	1	5	4.26	.955
Yardwork	154	1	5	3.60	1.286

Auto maintenance/upkeep	154	1	5	3.08	1.375
Home improvement projects	154	1	5	3.51	1.178
Meal preparation	154	1	5	4.23	.989
Petcare	154	1	5	3.53	1.314
Overall, after the pandemic is over I am more likely to do things on my own rather than pay someone else to do it for me.	154	1	5	3.62	1.116
I feel more confident in my own ability	154	1	5	3.64	1.028
I realize I am over-paying for services	154	1	5	3.52	1.055
It is just rewarding to do things myself	154	1	5	3.88	.895
It is safer to stay at home more instead of being around so many people	154	1	5	3.79	.981
I will not do more things on my own	154	1	5	2.73	1.205
Valid N (listwise)	154				

Table 3  
Paired Sample T-Tests Statistics

**Paired Samples Statistics**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	In 2019, I considered myself a "do-it-yourselfer." That is, someone who does things myself rather than paying others for services.	3.59	154	1.219	.098
	Overall, after the pandemic is over I am more likely to do things on my own rather than pay someone else to do it for me.	3.62	154	1.116	.090



**Paired Samples Test**

		Paired Differences					Significance			
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	One-Sided p	Two-Sided p
					Lower	Upper				
Pair 1	In 2019, I considered myself a "do-it-yourselfer." That is, someone who does things myself rather than paying others for services. - Overall, after the pandemic is over I am more likely to do things on my own rather than pay someone else to do it for me.	-.026	1.236	.100	-.223	.171	-.261	153	.397	.795

Table 4

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.730 <sup>a</sup>	.532	.517	.776

a. Predictors: (Constant), I will not do more things on my own, It is safer to stay at home more instead of being around so many people, It is just rewarding to do things myself, I realize I am over-paying for services, I feel more confident in my own ability

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	101.364	5	20.273	33.700	<.001 <sup>b</sup>
	Residual	89.032	148	.602		
	Total	190.396	153			

a. Dependent Variable: Overall, after the pandemic is over I am more likely to do things on my own rather than pay someone else to do it for me.

b. Predictors: (Constant), I will not do more things on my own, It is safer to stay at home more instead of being around so many people, It is just rewarding to do things myself, I realize I am over-paying for services, I feel more confident in my own ability

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.251	.410		.612	.542
	I feel more confident in my own ability	.444	.082	.409	5.422	<.001
	I realize I am over-paying for services	.336	.072	.318	4.658	<.001
	It is just rewarding to do things myself	.160	.089	.128	1.798	.074
	It is safer to stay at home more instead of being around so many people	.004	.065	.004	.064	.949
	I will not do more things on my own	-.024	.054	-.026	-.454	.650

a. Dependent Variable: Overall, after the pandemic is over I am more likely to do things on my own rather than pay someone else to do it for me.

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