RESEARCH AND CLINICAL MEDICINE JOURNAL
The European Journal of Innovative, Integrative and Translational Medicine
Volume VI, Issue 1, 2022

The Future of German Pharmacy Business Models with Retail Clinics as USP Against Online Pharmacies

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ORIGINAL PAPER

Abstract

Purpose. This study aims to discuss the chances of in-store pharmacies through in-store health services, e. g. vaccinations or Covid-19 tests, in Germany. As a result, retail clinics could lead to a USP against online pharmacies. Additionally, the study will show how possible retail clinics could look like and how the acceptance in the population is. *Research Methodology.* To conduct the survey, Google Forms was used together with MS Excel for the analysis. Various studies were reviewed, and care was taken to work as closely as possible to practice and its figures from e. g. associations, companies, or statista. *Results.* The launch of retail clinics could give German stationary pharmacies a new boost and differentiate them from online pharmacies on the market. Pharmaceutical services are in great demand among the population, hopefully, the legal framework will soon be in place, and the proper services will have to be offered to be able to fully generate the large sales potential. *Discussion and Conclusion.*The study only points to a general overview of how health services can help store pharmacies in the competition with online pharmacies in Germany. Yet there are also other possible USPs for store pharmacies, which are not concluded in that study. In addition, the legal framework under which pharmacies operate must be analyzed in detail by legal experts to obtain a precise overview of what is possible for pharmacies in the area of pharmaceutical services and retail clinics. The study is useful for pharmacists, business economists in general as well as in health care management.

Key words: Retail pharmacies, In-store health services, Pharmaceutical services, Retail clinics

I. INTRODUCTION

Pharmacies are playing a key role in German healthcare, esp. the local offline pharmacy stores. It is a well-known fact that they don´t just provide customers with medications but also trustfully consult them on health issues. Nevertheless, online pharmacies turnover has grown in the past few years in Germany and will be getting bigger and bigger each year. [1] This competition can be a risk for the local offline pharmacy stores. For this reason, they need a USP beyond consulting. Due to it can be applied in digital matters from online pharmacies similarly. Therefore, changes are inevitable for local pharmacies stores, to retain the greater market share. Hence, comprehensive in-store health services could alter the baseline of local pharmacy stores. The Covid-19 pandemic shows that in-store health services are demanded and clarify the important role of local pharmacies in Germany. For instance, many pharmacies are Covid-19 test centers or provide the EU vaccination certificate to vaccinated citizens. Meanwhile, pharmacies have been allowed to administer the vaccine against Covid-19 since February 8th, 2022. [2] Consequently, local pharmacies are crucial for the German campaign to fight against the virus, and they should use this impact to expand the range of health services in pharmacies. Promising in-store health services are e. g. vaccinations in general, treatment for common illness, chronic disease care, or additionally wellness services, such as sleep support, could be implemented.

Pharmacies in the U.S., such as CVS Pharmacy, offer already comprehensive in-store health services. However, the pharmacy market is different in the U.S. than in Germany. Whereas the local German pharmacies are normally small stores with counter service as the main sales area, are U.S. pharmacies usually vast stores, occasionally even with multiple

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floors, where the customers not just can shop drugs at the counter, but also nearly buy all everyday consumables, such as food, beverages, supplements, etc. This means, that U.S. pharmacies are more like German drug store chains, such as DM or Rossmann, just with additional counter service for pharmacy-required Rx pharmaceuticals and OTC products. Furthermore, the U.S. has huge pharmacy stores chains, e. g. Walgreens, CVS Pharmacy, Rite Aid, or even at Walmart stores are usually pharmacy counters. Yet, in Germany only Pharmacists can run a Pharmacy store, therefore in Germany exist a third-party ownership ban, with a maximum of three subsidiary pharmacies. [3] Those regulations lead to an economic disadvantage for local pharmacy store owners against online pharmacies in Germany. However, comprehensive in-store health services could lead to an advantage for local pharmacies. Howbeit, at least, consultations are already an important component in the range of services provided in German pharmacies.

Against this background, the central questions that motivate this paper are:

- Whether there is a demand for comprehensive healthcare services at retail clinics in Germany?
- What is the current legal framework?
- What this new pharmacy concept might look like?

II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

To better understand how the German healthcare system works and the contribution of retail pharmacies is important to know the informational behavior of potential sick or worried patients. Whereas it's a well-known fact, that in Germany, other than in the U.S., exist statutory health insurance for employees, trainees, pensioners, voluntarily insured persons as well as unemployed persons. This leads to ensuring that all insured persons receive medical care. According to the Statistisches Bundesamt, only 61,000 persons possessed no health insurance coverage in Germany in 2019. [4] This means, that nearly all residents can afford their treatments with usually no or low co-payments, average Co-payment per Package was 3 € in 2020. [3] Due to that fact, one of the main information sources, listed in Table 1, is Personal conversations with doctors, therapists, or nurses with 48 %. In addition, also the internet is a popular information source, esp. in the age group of 18 -29 years with 46 %, but also in general with 36 %. Personal conversation with a pharmacist as sources has only 22 % in general and in the younger age group of 18 – 29 years just 7 %. [5] This number could be increased thru the help of comprehensive in-store health services in retail clinics. However, 22 % is a good starting point for the service, as shown also that pharmacists are trustworthy sources. Since, according to Bertelsmann Stiftung the web page apotheken-umschau.de, of the pharmacies exclusive magazine, the level of awareness reaches 73% and is trustworthy to 67% for the surveyed. [6]

	18 - 29 Years	18 - 80 Years
Internet	46 %	39 %
Personal conversations with family members, friends, colleagues	41 %	46 %
Personal conversations with doctors, therapists, nurses	29 %	48 %
Books, health guides, encyclopedias	17 %	22 %
Counseling centers, health, or educational institutions	10 %	8 %
Personal conversations with pharmacists	7 %	22 %

Table 1: Health-related information sources of German Internet users in 2017 [5]

II.1 Overview of the German pharmacy market

The German pharmacy market grew in the past few years, from ca. 33,700 Mio. EUR in 2018 to 37,500 Mio. EUR in 2020. These figures represent a market growth of 11%. About 85% of the revenue in 2020 was generated from the Rx pharmaceutical business alone. Also, in previous years, the Rx business represents the largest share of revenues. [7] Despite this, was the sales trend in 2020 for the general pharmacy market -4,5 %, meanwhile, the sales trend for online mail pharmacy was +14,4 %. Granted, in this context, it must be noted that the Covid 19 pandemic probably triggered the negative trend. Nevertheless, the overall sales market grew only marginally in the years before, while the mail order trend grew steadily by 5 to 6% p. a. [8] This trend makes it clear, that stationary retail pharmacies must improve their services, or they will lose more and more of their sales share.

There are various reasons, why online pharmacies are increasing their sales. On the one hand, online pharmacies usually offer more favorable prices, than classical retail pharmacies. This point is considered by 68% to be the main argument in favor of online pharmacies, shown in Figure 1.

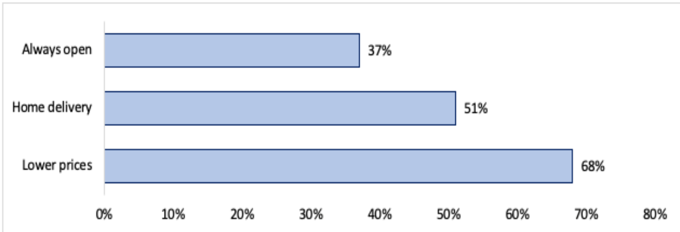

Figure 1: Key points favoring online pharmacies [11]

Thereafter, is home delivery with 51% and online pharmacies are never closed with 37%. [9] On the other hand, there are certain aspects in favor of the stationary retail pharmacy, shown in Figure 2. Firstly, the customer has the benefit of being able to take his products, esp. important medications, directly with him, 62% find this to be an important advantage. Secondly, 61% find the consultation better at a retail pharmacy. Finally, the fact that prescriptions do not have to be sent in is found to be an advantage by 51%. [10]

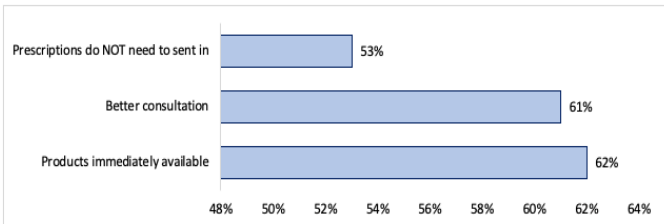

Figure 2: Key points favoring retail pharmacies [10]

II.2 Online pharmacies in Germany

Statics shows that around 49 % of Germans order their medicines online, and do so at least rarely (14 %), occasionally (21 %), or even regularly (14 %) in 2017. While 26% of people surveyed do not order online but could imagine they might, only

23% is this out of the question. [12] In 2021, a total of 62% reported ordering regularly from online pharmacies. In particular, the age group from 16 to 29 years with 79 %, as well as the group from 30 to 49 years with 80 %. The generation from 50 to 64 years amounts to 66 % and 41 % of the over 65-year-olds order regularly online. [13] Interestingly, if Amazon entered the mail-order pharmacy business, as it did in the U.S., 48 % would be willing to buy their OTC medications there. [14] Yet only 24 % would also be willing to purchase Rx medications at Amazon, while 60 % would prefer to buy in an established retail pharmacy. [14]

According to the Data evaluation of Statista-e-commerce, the ten biggest online pharmacies have a cumulated revenue of 2.2 billion Euros, representing a market share of 5,9 %, in the year 2020. The data shows that *shop-apotheke.com* was the biggest online pharmacy, with 627 Mio. EUR in revenue and thus a market share of 1.7 %, in 2020. Thereafter as number 2 is *docmorris.de*, with 565,3 Mio. EUR in revenue and a market share of 1.5 %. [9] Admittedly, the market share of 1.7 % or 1.5 % is low on the first view, however, due to the maximum of three subsidiary pharmacies, it's nearly impossible for classical retail to achieve such a market share.

As number one online pharmacy shop-apotheke offers various services to their 6.3 Mio. customers European-wide. The company operates in seven European countries, besides Germany, also in Belgium, France, Switzerland, Austria, Hungary, and in the Netherlands. Shop Apotheke‘s offer is complemented by subsidiaries such as smart patient, digital medication management, or nu3, producer of functional nutrition products. Moreover, Shop Apothke ‘s online pharmacy business is continuously increasing across Europe. In 2020, the company shipped a total of 16.6 million parcels to customers, a diurnal rate of 45,400 parcels. On average, the value of the shopping baskets amounted to approx. 66 EUR. Furthermore, the e-commerce business achieves a repeat order rate of 82% among its customers. [15] In addition, according to their web page, Shop Apotheke attracts its customers by offering the following services:

- A product portfolio including over 100,000 articles, ranging from beauty and care products to veterinary medicines.
- Favorable prices, with allegedly savings potential of up to 50% and, bonus payments of up to 30 euros per private prescription.
- Deliveries within 1 to 2 business days, as well as free shipping delivery starting at 19 euros order value. Same-Day-Delivery is available in Berlin, Rhine-Ruhr, Munich, and Stuttgart with Shop Apotheke Now.
- Customers are provided with pharmaceutical consulting via email, on the phone, or using a live chat.
- Furthermore, an app is offered for easy ordering via smartphone as well as a benefit program entitled RedPoints.[15]

The offered services largely match the offers of the competing other online pharmacies in Germany.

II.3 Stationary retail pharmacies in Germany

Only licensed pharmacists can own a pharmacy or practice as a pharmacist in Germany. It requires a state examination as well as 5 years of study at a university. This includes a 2-year long basic study, 2 years long main study as well as a one-year-long internship. A pharmacist can only operate one pharmacy plus max. of three subsidiaries nearby the main pharmacy.

Those subsidiaries must have a licensed pharmacist as a manager on their own. Stationary retail pharmacies are also allowed to operate as mail-order pharmacies, which are used esp. for courier services. However, a special mail-order permit is required for this. [3] The same statutory requirements apply to the online pharmacy as well.

Throughout Germany, there are a total of 18,753 retail pharmacies supplying pharmaceuticals. Every day, about 3.3 million customers visit a retail pharmacy in Germany, combining for a total of 1 billion customer contacts per year. A total of 300 thousand courier services are performed by retail pharmacies every day to deliver the needed pharmaceuticals to customers' homes. Patients prescribed with more than 3 medications regularly have a main pharmacy 88% of the time.

In addition to that, 83% of people trust their retail pharmacies and about 93 % of the customers are satisfied in Germany. [3]

Ensuring the pharmaceutical supply and optimizing patient care is one of the main priorities of retail pharmacies, therefore trustful cooperation with other medical professionals and institutions, such as doctor offices, hospitals, and care facilities are important. Moreover, through their expertise, independence, and availability, pharmacies play an important role in the health care system. The following points are the key services provided by a local retail pharmacy:

- Consultation and support on health issues, on pharmaceutical therapy. The focus is on ensuring that the medication is accepted, correctly dosed, correctly combined, correctly stored, and properly consumed at the correct time and in the correct manner.
- Increasing the safety, effectiveness, and efficiency of pharmaceutical therapy, as well as the avoidance of potential risks. For this purpose, medication analysis and medication management are continuously applied.
- The manufacture of pharmaceuticals is tailored to the specific needs of customers.
- Retail pharmacies have an important role in primary prevention, secondary prevention as well as tertiary prevention, in other words in disease prevention, early detection as well as follow-up.
- In the future, pharmacy-related services will also become an important customer benefit, or rather, will be further expanded. [16]
- On top the retail pharmacies provide pre-prepared medications for customers, rotating night and emergency services [16]

Figure 3 shows a typical German pharmacy from inside. Usually, the stores have a small shelf area for Free-choice products, e. g. cosmetics and a large counter for consultation and to present OTC products in the back. The back office of a German retail pharmacy is used as a storage space, often even completely automated with the help of pharmacy automation machines, as well as a workshop and laboratory for the manufacturing of pharmaceuticals. A typical pharmacy needs normally at least 110 square meters of floor space. In 2020 the average German retail pharmacy has, as shown in table 2, a net sales revenue of 2,776 thousand EUR, this is a market share of ca. 0.0074 %, gross revenue of 624 thousand EUR, and a fiscal operating result of 168 thousand EUR. [3] In recent years, the numbers have continued to grow, however, the high increase in 2020 was triggered by the Covid-19 pandemic.

Figure 3: Inside view of a typical German Pharmacy [17]

	2018	2019	2020
Net Sales Revenue in thousands of euros	2,381	2,587	2,776
− Cost of Goods and Sales	1,815	1,991	2,152
= Gross Revenue	567	596	624
− Staff / Payroll	256	272	280
− Other Tax-Deductible Expenses	173	181	188
= Fiscal Operating Result (pre-tax)	144	148	168
of which Partial Operating Result for the SHI	83	84	85
of which Subsidies from Night-time and Emergency Service Fund	6	6	8
of which Subsidies for Delivery Services	0	0	4

Table 2: Operating results of the average German pharmacy [3]

II.4 Retail Clinics in the U.S.

U.S. pharmacies started to open their first retail clinics in the year 2000. Retail clinics are designed to simplify healthcare for customers and make it ubiquitously available. Doctors or nurses usually treat the patients there, additionally, they are "located inside large retail stores, they are open evenings and weekends, require no appointment, and feature fixed, posted prices for all services." [18] Due to these factors, patients choose a retail clinic instead of other healthcare options. Further, retail clinics patients typically do not have a primary care physician or an established relationship with one. Retail clinics are used mainly by young adults, minority families, and families with children. Patients are thoroughly satisfied with the services offered by retail clinics. [18] There are several approaches for the implementation of retail clinics, most of the pharmacies use the first model:

1. The clinic is owned and operated by the pharmacy.
2. The clinic is owned by an independent company that partners with a retail pharmacy.
3. The clinic is owned by a hospital, a physician group, or another health care provider. [18]

However, retail clinics can also be a source of risks, as there could potentially be conflicts of interests leading as an example to overprescribing of medicines. Although, according to one study, antibiotic prescribing rates of retail clinics are similar to those of normal physicians. [18]. The retail pharmacies anticipate that the implementation of retail clinics will generate additional revenue from the fees, increase prescriptions and OTC sales, attract new customers, increase customer experience and separate from other competitors. [19] The major U.S. pharmacy chains all have their retail clinics or collaborations with third-party companies, such as CVS pharmacy has implemented the minute clinics and HealthHubs in their stores, as can be seen in figure 4.

In a total of 13% of the CVS pharmacies stores, the extended healthcare service is offered in the in-house retail clinic. As a result, they are the number one provider of retail clinics with a 52% market share and 1,000 locations. [21] The "MinuteClinic offers expanded services where clinicians can screen, diagnose, and treat customers and provide follow-up care for chronic conditions as well as provide services for minor injuries and illnesses, immunizations, and annual exams, in-store or virtually. Locations inside Health HUB stores also offer sleep apnea assessments and phlebotomy services." [22] In some stores, the range of services is further expanded by HealthHubs, where the retail clinic occupies up to 20% of the total store space.

The new services are: "new product categories, digital tools, and on-demand health kiosks, trusted advice and personalized care." [23] Also newly introduced as part of HealthHub are the Care Concierges, who has the function of, "educating customers about new service offerings, helping them navigate the in-store services and events, and connecting them to in-store providers. " [23] For CVS pharmacy, virtual care services also play an important role in their retail clinic offer. Through a mobile app and telehealth, CVS Health also offers the same high-quality service of the minute clinic and HealthHubs virtually via smartphone, tablet, or computer. [24].

Figure 4: CVS Health minute clinic & HealthHub [20]

II.5 Legal Framework for retail clinics in Germany

In Germany, various laws and regulations govern the work, tasks and permitted services offered by pharmacies. The most important laws are the *Apothekengesetzt*, ApoG, the Arzneimittelgesetz, AMG, the *Sozialgesetzbuch Fünftes Buch*, SGB V, and since recently the *Gesetz zur Stärkung der Vor-Ort-Apotheken*, VOASG.

According to § 11 of the German Pharmacy Act (ApoG), a law that makes it more difficult for a retail clinic to cooperate with physicians is the prohibition on referrals. This states that physicians may only refer or recommend their patients to a retail pharmacy in very specific cases. This is intended to ensure that patients are free to choose their retail pharmacy and to prevent collusion between physicians and pharmacists. [25]

Since last year, Section 129 (5e) of SGB V has provided a right to pharmaceutical services that go beyond the consultation obligation. The exact services to be covered are to be defined by the German National Association of Statutory Health Insurance Funds. Nevertheless, the following services are mentioned in the legal text: application of specific therapeutic products, therapy of chronic serious diseases, treatment of people with polymerization and multimorbidities, and treatment of patients who need special attention and support. [26] As of today, the association has not yet agreed on which benefits to include. The ABDA has drawn up a list of 115 possible proposals and presented 10 of them to the association. The ABDA aims to enable as many retail pharmacies as possible to offer pharmaceutical services. [27] Together with the *Gesetz zur Stärkung der Vor-Ort-Apotheken*, this law could be the first important step in the direction of a legal basis for the operation of retail clinics in German pharmacies. Of course, the pharmaceutical services would have to be selected in such a way that they are very attractive for the customers but also at the same time simple and manageable to implement for the retail pharmacies.

III. RESEARCH METHODOLOGY

In the selection of the sources, great importance was attached to the fact that all sources originate at most from the last decade and are therefore up-to-date. In addition, sources were selected as close as possible to the practice, for example facts about the MinuteClinic directly from CVS Health or about the German pharmacy market from the pharmacy association ABDA. Furthermore, the integration of many data, facts, surveys, and studies from reputable sources, such as Statista or the German Federal Statistical Office, was very valuable. For better clarification and comprehensibility, diagrams, tables, graphics, and images were used. These enable the reader to recognize and understand important points directly at first glance.

Also, a separate own survey was conducted as part of this research project work. The survey was conducted using Google Forms and contained 10 questions. A total of 82 people participated in the survey, of which 47.6 % were male and 50 % were female, and one x-gender person, as well as one person, chose the option of not answering (each 1,2 %). 41.5 % of the participants were in the age group of 18-30 years, 17.1 % 31-40 years, 11 % 41-50 years, 19.5 % 51-65 years, and 9.8% reported being 65 years or older as well as 1.2 % chose the option not answering. The demographic details of the surveyed persons can also be seen in the graphics below (Figure 5).

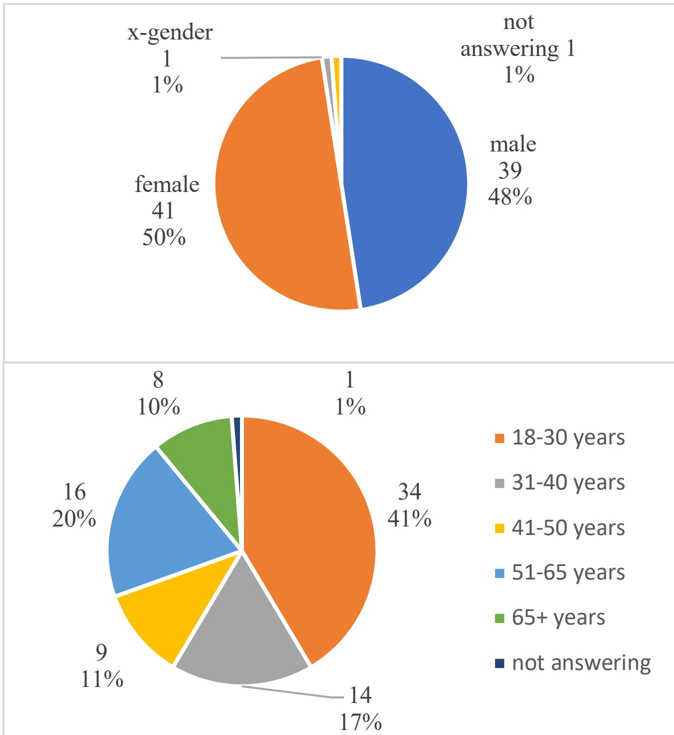

Figure 5: Demographic details of the survey participants (Own survey, 2022)

IV. Results and discussions

IV.1 Results and analysis of the survey

The survey, detailed results of the can are found in appendix 1 and more in-depth correlations in appendix 2, shows very interesting outcomes and correlations. A breakdown of the key answers is as follows:

- Customers are very satisfied with the consultation they receive in their pharmacies.
- Among the 82 participants, 48.8% purchase their medications only from a stationary retail pharmacy, 8.5% only online, and 42.7% use both forms of supply.
- Responses to the survey indicated that the main reasons for choosing online pharmacies are the low prices, then the home delivery, and lastly, the 24/7 ordering availability.
- About 75% said they had the main pharmacy to buy their pharmaceuticals.
- A Covid-19 vaccine offer would be accepted by 80.5% and opposed by 14.6%. For 4.9% of the respondents, it was not convenient to answer the question. Only 64.6% would accept an offer of other vaccines.
- Other pharmaceutical services provided by a pharmacy would be of interest for 78%.
- A clear majority of 87.8% would welcome collaborations between physicians and pharmacies for treatments at pharmacies.

Accordingly, customers are very satisfied with the consultation they receive in their pharmacies. As figure 6 shows, 73.2 % state that they are satisfied to very satisfied. On a scale of 1 to 10, 1 very dissatisfied and 10 very satisfied, the majority awarded 8 points, in second place comes 10 points with 20 people and in third place the score of nine with 15 people. The median score of all responses is 8.1, which confirms the value given by most respondents. By looking at satisfaction based on age group, the 65+ age group has the highest satisfaction score at 9.5, then comes the 41-50 age group at 8.4, then the 18-30 age group at 8.03, the 31-40 age group at 7.93, and the lowest satisfaction among the 51-65 age group 7.56. It is noticeable that the figures are also situated around the value 8.1 and that all age groups have a high level of satisfaction with the consulting services. Males are slightly more satisfied with a score of 8.33 than females with 7.93. All this demonstrates that the positively experienced consulting service is an important part of retail pharmacies and that personal consultation is an advantage for stationery retailers. Furthermore, it shows that this current core service is a good foundation to successfully offer further pharmacy services in retail clinics in the future.

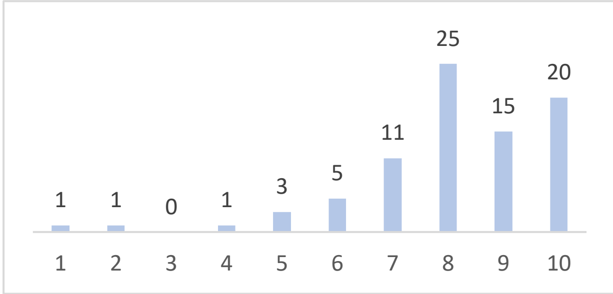

Figure 6: Customers' satisfaction with pharmacy consultation

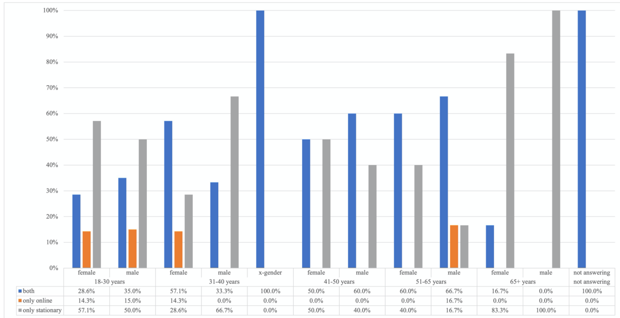

Figure 7: Purchase behavior by age & gender

The graphic (figure 7) illustrates that in particular the younger generation, irrespective of gender, only obtain their pharmaceuticals from online pharmacies. Noteworthy is that even in the age group 51-65 there are people who also buy their medicines only from online pharmacies, as well as a significant increase in the number among 65+ year-olds who obtain their medications only from stationary pharmacies. However, the number of people who use only stationary pharmacies and the number of people who use both options are very close to each other. This makes it clear that stationary retail pharmacies must also focus to address young adults by providing pharmacy services to set themselves apart from online pharmacies in the long term and, ideally, also offer them virtually. The figures with 100% may be disregarded since only one person voted in these cases.

Regardless of the age group, the number of people who would get vaccinated against Covid-19 at a pharmacy is high. However, the general willingness to accept other vaccinations is generally lower. Among the 18-30 age group, the willingness rate drops by 6 points from almost 80% to 74%. In the 31-40 age group, the rate is even higher, dropping from 93% down to 64%. The same applies to the 41-50 age group, where the figure drops from 89% toward 67%. From the 75% of the 65+-year-olds who would get the vaccination against Covid in a pharmacy to 63% with other vaccines.

Continuing, it is interesting to note that the satisfaction rate of those who cannot imagine receiving vaccinations in a pharmacy is 7.78, and the value of those who can imagine it is only marginally higher at 8.19. Furthermore, 80% of the people who buy both online and, in a store, would use the offer of pharmaceutical services. Among people who only buy online, 86% can imagine this, and finally, those who buy their medicines only in a stationary pharmacy, 75% can imagine it. The results demonstrate that by offering pharmaceutical services, customers can be attracted to online pharmacies, as well as those who use both options. This is important to see that retail clinics can represent a USP against online pharmacies and the offer is demanded by a variety.

IV.2 Possible retail clinic concept for German pharmacies

Retail clinics can bring great added value to German stationary pharmacies. Various options are available for pharmacies to implement these services. The concept should include answers to the points of facilities for the retail clinic as well as the scope of pharmaceutical services including virtual offers.

A retail clinic requires extra space within the pharmacy, this could be a potential problem for some pharmacies depending on the situation and space limitations. The facilities should be attractive and modern, designed to be inviting to patients and to give a high comfort level. In addition, this also applies to the interior and medical equipment, these should be up to date and generally well equipped. Pharmacies shouldn't be compromising here, like this, and especially the first impression is what determines whether a patient will come back.

Although the range of services is also an important factor, due to the current lack of legal basis, it is not possible to make a well-founded statement in this regard. Nevertheless, the services should be comprehensive and profound, as well as sustainable, so that the services can be offered in the long term.

Vaccinations should be included in the portfolio, which is currently included n a pilot project in Germany. Screening, diagnosis, and treatment of clients and follow-up care for chronic conditions should also be included, as well as services for minor injuries and illnesses; wellness offerings could also be attractive.

In any case, the services should also be available virtually, at least in part. Telehealth services could be used for counseling, education, or preventive care. In addition, information in the form of blog articles or videos could inform about current health trends, or current diseases, e.g. flu epidemics. These virtual services do not have to be offered by each pharmacy individually but could be organized by associations or cooperations of several pharmacies. Ideally, the digital offering would be flanked and complemented by a comprehensive online store.

In addition, the employees of the pharmacy need qualified training and education to be able to offer a possible high quality to the customers. New employment especially nurses could also be essential. Whether cooperation between pharmacies and physicians is possible depends on the legal situation. However, this would have the advantage of extremely high quality of service to customers. It would also provide increased value, especially in rural regions with travel doctors.

Retail clinics could increase the sales and turnover of German pharmacies. In addition, they would be strengthened compared to online pharmacies. Competition between stationary retail pharmacies could also be promoted and stimulated. These clinics would improve and increase the health care of the German population. Which means the health care system would be noticeably unburdened? Especially in rural areas, this would make a big difference, but of course also in urban areas. Finally, it would relieve the burden on doctors' offices and hospitals, allowing them to focus on the seriously ill and injured, and to provide better care for urgent emergencies.

IV.3 Conclusion and Outlook

In summary, the launch of retail clinics could give German stationary pharmacies a new boost and differentiate them from online pharmacies on the market. Pharmaceutical services are in great demand among the population, hopefully, the legal framework will soon be in place, and the proper services will have to be offered to be able to fully generate the large sales potential. Thus, it can be said that retail clinics represent a USP compared to online pharmacies, especially when virtual care services are offered as a supplement.

All of this points to the fact that retail clinics and pharmaceutical services should be made possible for pharmacies. Thus, not only the stationary pharmacies but the entire population benefits from the strengthening of the health care system. When it comes to implementation, pharmacies should look to the U.S. and the implementation done by pharmacies there. The experience and development that the retail clinic market has gone through in the last 20 years allow a good overview of what needs to be taken into consideration. Even if it must be mentioned that the retail clinics in the US have other possibilities and prerequisites due to the permission of pharmacy chains.

V. LIMITATION AND STUDY FORWARD

The study only points to a general overview of how health services can help store pharmacies in competition with online pharmacies in Germany. Yet there are also other possible USPs for store pharmacies, which are not concluded in that study. In addition, the legal framework under which pharmacies operate must be analyzed in detail by legal experts to obtain a precise overview of what is possible for pharmacies in the area of pharmaceutical services and retail clinics. As soon as the legal regulations for retail clinics and pharmaceutical services have been finalized, studies should be conducted to analyze the possible demand of these services and to elaborate specific concepts and implementation possibilities for retail clinics.

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Appendix

Appendix 1: Results of the survey

	Absolut	Prozentual
Total number of participants:	82	100,0%
Gender		
male	39	47,6%
female	41	50,0%
x-gender	1	1,2%
not answering	1	1,2%
Agegroup		
18-30 years	34	41,5%
31-40 years	14	17,1%
41-50 years	9	11,0%
51-65 years	16	19,5%
65+ years	8	9,8%
not answering	1	1,2%
Do you buy your pharmaceuticals at a stationary pharmacy or online?		
only stationary	40	48,8%
only online	7	8,5%
both	35	42,7%
If you only buy your medicatic what is the main reason for you?		
Home delivery	8	9,8%
stationary	45	54,9%
Lower prices	23	28,0%
ordering 24/7	6	7,3%
Do you have a main pharmacy?		
yes	62	75,6%
no	20	24,4%
How satisfied are you with the consultation in your pharmacy? (1 is low; 10 is perfect)		
1	1	1,2%
2	1	1,2%
3	0	0,0%
4	1	1,2%
5	3	3,7%
6	5	6,1%
7	11	13,4%
8	25	30,5%
9	15	18,3%
10	20	24,4%
Would you accept a Covid-19 vaccination offer at your pharmacy or would you choose to be vaccinated at your pharmacy?		
yes	66	80,5%
no	12	14,6%
not answering	4	4,9%
Could you imagine receiving other vaccinations at the pharmacy?		
yes	53	64,6%
no	29	35,4%
Would you demand additional health care services at a pharmacy?		
yes	64	78,0%
no	18	22,0%
Would you appreciate collaborations between pharmacies and primary care physicians for treatments in pharmacy facilities?		
yes	72	87,8%
no	10	12,2%

Appendix 2: Deep-dive into the results of the survey

Agegroup	Mittelwert von How satisfied are you with the consultation in your pharmacy?
65+ years	9,50
41-50 years	8,44
18-30 years	8,03
31-40 years	7,93
51-65 years	7,56
not answering	7,00
Gesamtergebnis	**8,10**

Anzahl von Do you buy your pharmaceuticals at a stationary pharmacy or online?				
Gender	both	only online	only stationary	Gesamtergebnis
female	41,46%	7,32%	51,22%	100,00%
male	41,03%	10,26%	48,72%	100,00%
not answering	100,00%	0,00%	0,00%	100,00%
x-gender	100,00%	0,00%	0,00%	100,00%
Gesamtergebnis	**42,68%**	**8,54%**	**48,78%**	**100,00%**

Anzahl von Do you buy your pharmaceuticals at a stationary pharmacy or online?				
Agegroup	both	only online	only stationary	Gesamtergebnis
⊟ 18-30 years	**32,4%**	**14,7%**	**52,9%**	**100,0%**
female	28,6%	14,3%	57,1%	100,0%
male	35,0%	15,0%	50,0%	100,0%
⊟ 31-40 years	**50,0%**	**7,1%**	**42,9%**	**100,0%**
female	57,1%	14,3%	28,6%	100,0%
male	33,3%	0,0%	66,7%	100,0%
x-gender	100,0%	0,0%	0,0%	100,0%
⊟ 41-50 years	**55,6%**	**0,0%**	**44,4%**	**100,0%**
female	50,0%	0,0%	50,0%	100,0%
male	60,0%	0,0%	40,0%	100,0%
⊟ 51-65 years	**62,5%**	**6,3%**	**31,3%**	**100,0%**
female	60,0%	0,0%	40,0%	100,0%
male	66,7%	16,7%	16,7%	100,0%
⊟ 65+ years	**12,5%**	**0,0%**	**87,5%**	**100,0%**
female	16,7%	0,0%	83,3%	100,0%
male	0,0%	0,0%	100,0%	100,0%
⊟ not answering	**100,0%**	**0,0%**	**0,0%**	**100,0%**
not answering	100,0%	0,0%	0,0%	100,0%
Gesamtergebnis	**42,7%**	**8,5%**	**48,8%**	**100,0%**

Gender	Mittelwert von How satisfied are you with the consultation in your pharmacy?
female	7,93
male	8,33
not answering	7,00
x-gender	7,00
Gesamtergebnis	**8,10**

Anzahl von Do you have a main pharmacy?	Spaltenbeschriftungen		
Gender	no	yes	Gesamtergebnis
female	21,95%	78,05%	100,00%
male	23,08%	76,92%	100,00%
not answering	100,00%	0,00%	100,00%
x-gender	100,00%	0,00%	100,00%
Gesamtergebnis	**24,39%**	**75,61%**	**100,00%**

Anzahl von Do you have a main pharmacy?	Spaltenbeschriftungen		
Gender	no	yes	Gesamtergebnis
18-30 years	26,47%	73,53%	100,00%
31-40 years	42,86%	57,14%	100,00%
41-50 years	11,11%	88,89%	100,00%
51-65 years	18,75%	81,25%	100,00%
65+ years	0,00%	100,00%	100,00%
not answering	100,00%	0,00%	100,00%
Gesamtergebnis	**24,39%**	**75,61%**	**100,00%**

Anzahl von Would you accept a Covid-19 vaccination offer at your pharmacy, or	Spaltenbeschriftungen			
Agegroup	no	not answ	yes	Gesamtergebnis
18-30 years	11,76%	8,82%	79,41%	100,00%
31-40 years	7,14%	0,00%	92,86%	100,00%
41-50 years	11,11%	0,00%	88,89%	100,00%
51-65 years	25,00%	6,25%	68,75%	100,00%
65+ years	25,00%	0,00%	75,00%	100,00%
not answering	0,00%	0,00%	100,00%	100,00%
Gesamtergebnis	**14,63%**	**4,88%**	**80,49%**	**100,00%**

Anzahl von Could you imagine receiving other vaccinations at the pharmacy?	Spaltenbeschriftungen		
Agegroup	no	yes	Gesamtergebnis
18-30 years	26,47%	73,53%	100,00%
31-40 years	35,71%	64,29%	100,00%
41-50 years	33,33%	66,67%	100,00%
51-65 years	56,25%	43,75%	100,00%
65+ years	37,50%	62,50%	100,00%
not answering	0,00%	100,00%	100,00%
Gesamtergebnis	**35,37%**	**64,63%**	**100,00%**

Could you imagine receiving other vaccinations at the pharmacy?	Mittelwert von How satisfied are you with the consultation in your pharmacy?
no	7,78
yes	8,19
Gesamtergebnis	**8,10**

Anzahl von Would you demand additional health care services at a pharmacy?	Would you demand additional health care services at a pharmacy?		
Do you buy your pharmaceutical at a stationary pharmacy or online?	no	yes	Gesamtergebnis
both	20,00%	80,00%	100,00%
only online	14,29%	85,71%	100,00%
only stationary	25,00%	75,00%	100,00%
Gesamtergebnis	**21,95%**	**78,05%**	**100,00%**