# THE MODERATING EFFECT OF CONTEXTUAL FACTORS ON THE IMPACT OF COMPETITIVE BEHAVIOR ON COMMUNITY PHARMACISTS' PERFORMANCE IN NIGERIA

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## Abstract

*Extant literature suggests that competitive behavior (CB) tends to positively enhance job performance (JP). There is scarce empirical evidence to justify this assertion under socio-behavioral contexts influencing the work environment among community pharmacists. Intuitively, community pharmacies are knowledge-based organizations, and the right environment needs to be nurtured to support collective performance among pharmacists. To fill this gap, the model of interpersonal behavior was applied as a theoretical framework to evaluate the moderating effects of contextual factors-professionalism (PFN), group associations (GA), collaborative behavior (CTB), and professional training (PT) on the relationship between CB and JP. A quantitative cross-sectional study with a self-reported questionnaire was administered to 654 randomly selected community pharmacists in Southwest Nigeria. To align theory with model specification, formative or emergent constructs were specified as moderator variables- P_PF [PFN & PT] and G_CB [GA & CCB] using structural equation modeling in WarpPLS. The structural model had acceptable fit and validity. CB positively and significantly influenced JP. Findings showed that high G_CB significantly weakened the relationship between CB and JP compared to the insignificant effect of P_PT. Invariably, group-linked collaboration weakens the effect of CB on JP. The study asserts that professional groups have a role to play in appropriating competitiveness for enhanced performance. The study recommends educational training for pharmacists at the undergraduate and graduate levels and a shift from an individualistic to a group paradigm in practice.*

**Keywords**: Community pharmacist; Competitive behavior; Model of interpersonal behavior; Performance.

## 1. Introduction

A community pharmacist operates in the workspace defined as a community pharmacy. A community pharmacy practice has hybrid functionalities: firstly, to provide quality medicines and pharmaceutical care to society, and secondly, to operate as a competitive business entity or enterprise with projected financial objectives (Okai *et al.*, 2019; Cavicchi & Vagnoni, 2020). Typically, community pharmacies fall within the small and medium-scale sector which is a critical part growth segment of the economy in Africa (Ng'ora, Mwakalobo & Lwesya, 2022). The commercial dimension of community pharmacy practice apart from its social service dimension suggests the presence of competition for resources in the work environment which is influenced by contextual factors with a potential impact on the performance of community pharmacists (Matthew *et al.*, 2020; Cavicchi & Vagnoni, 2020). These contextual factors by definition, are attributes, behaviors, or conditions that influence relationships. They have either attenuating or aggravating effects on relations between variables defining a relationship. Thus, gives more light on how real-life situations influence direct relationships (Hovlid & Bukve, 2014).

Also, contextual factors are a range or spectrum of influences that could be personal, social, cultural, economic, or political which affects outcomes and processes involving specific population groups. (Hovlid & Bukve, 2014). However, there is little or no empirical evidence showing the influence of contextual factors such as professional training (*PT*), group association (*GA*), collaborative behavior (*CTB*), and professionalism (*PFN*) on the relationship between competitive behavior (*CB*) and job performance (*JP*) among community pharmacists. It is established in extant literature that the performance of individuals and organizations tends to improve under competitive conditions. This is expressed by increased *CB* to outperform or outwit perceived competitors for more patronage from customers and increase market share (Mildawani *et al.*, 2019; Tsiakara & Digelidis, 2021).

Hence, this study proposes that *PT, GA, CTB*, and *PFN* have a potential influence on how the *CB* of community pharmacists affects their *JP* (Morley & Cashell, 2017; Emeni *et al.*, 2018; Chiriac *et a*l., 2021: Wang *et al.*, 2018; Cavicchi & Vagnoni, 2020). Hence, evaluating the influence of contextual factors on how community pharmacists compete and perform in practice is relevant. Therefore, this paper attempts to develop a structural equation model using the framework of the Theory of Interpersonal behavior to explore how contextual factors (*PT, GA, CTB*, and *PFN*) potentially influence the relationship between behavioral intention (*CB*) and outcome *JP* (Triandis, 1977; Moody & Siponen, 2013).

## 2. Theoretical Framework and Hypothesis Development

### *2.1. Model of Interpersonal Behavior*

The model of interpersonal behavior as proposed by Triandis (1977) provided the basis for this study (Triandis, 1977). The framework of the study is premised on the fact that the latent variable, *CB* is a behavioral construct that expresses an individual's desire and actions to compete and earn more market share compared to his or her counterparts. Hence, this study proposes a hypothesis that the desired performance variable *JP* obtained due to competitiveness by the community pharmacist is either strengthened or weakened in the presence of contextual factors that shape or influence this observed relationship. Therefore, this study empirically examines the direct influence of competitive behavior on job

performance and evaluates the moderating effects of contextual factors- *PF, GA, CTB*, and *PT* on the relationship between *CB* and *JP*.

### *2.2. Professionalism*

*PFN* as a sociological concept defines and relates to how professionals comport and conduct their duties or occupational functions ethically. Several authors have examined the aspects and dimensions of professionalism; Lynch *et al* (2004) reviewed the literature and surmised that *PFN* assessment covers ethics, personality attributes, and behaviors as relevant aspects to assess the construct (Lynch *et al.*, 2004). It involves a set of skills or values that apply to a given profession or job namely: social, technical, and theoretical competence, social skills as well as the right personality skills and appearance (Adler *et al.,* 2008; Brante, 2010).

### *2.3. Professional Training*

A professional is a tertiary or institutionally trained individual who belongs to a professional body or organization regulated by statutory standards, ethics, and conduct (Jui & Wong, 2013, Emeni *et al.,* 2018). A pharmacist is a holder of a Bachelor of Pharmacy (BPharm) or Doctor of Pharmacy (PharmD) awarded by a government-recognized University. The practice of a pharmacist is regulated by the government regulatory body, the Pharmacists' Council of Nigeria (PCN) which regulates *PT* and the curriculum of Universities in Nigeria (PCN, 2020).

### *2.4. Collaborative Behavior*

*CTB* refers to behaviors that support cooperation and coordination between persons or groups working together for a common or mutually beneficial purpose/s (Patel, 2016; Green & Johnson, 2015). *CTB* is an important behavioral attitude in multidisciplinary teams as well as within the same profession (Morley & Cashell, 2017). In healthcare teams, performance, innovation, and quality of service are greatly enabled or enhanced. A study by Oamen (2023) surmised that intraprofessional collaboration was a critical missing link among community pharmacists with implications on interprofessional collaborative relations with other health professionals (Oamen, 2023a).

Low levels of collaborative behavior were reported as a challenge to pharmaceutical care delivery in the study of community pharmacists' services and collaboration in Sweden (Frisk *et al.*, 2019; Allemann *et al.,* 2014). Conversely, collaboration among registered nurses in Finland and Norway showed enhanced knowledge, division of labor, and learning (Ylitormanen *et al.*, 2022). *CTB* improves group bonding, capacity, productivity, creativity, and innovativeness, and maximizes learning opportunities (Green & Johnson, 2015; Ma *et al.,* 2018).

### *2.5. Group Association*

Healthcare professionals' participation in professional bodies and groups has been established to perpetuate the existence and collegiality. In the literature, aligning with such group associations proffers identification and inter- and intra-professional collaboration for professionals (Chiriac *et al.*, 2021; Assbeihat, 2016). For example, in a study situated in Norwegian Universities, belonging to a research network or group tends to enhance publication productivity and quality (Kyvik & Reymert, 2017).

There are several benefits of professional *GA* for professionals from the same industry, namely: 1] provides networking platforms for learning and improvement, 2] ideas sharing and collaboration for problem-solving, 3] access to information, 4] career opportunities, 5] achieve economies of scale, 6] act as business associations to further economic and profit interests (Ibrahim *et al,* 2020). In Nigeria, the Association of Community Pharmacists of Nigeria (ACPN) is a typical affiliate group that represents all registered community pharmacists.

### *2.6. Competitive Behavior*

By nature, human beings are competitive considering the scarcity of resources and the need for supremacy in any chosen endeavor. Therefore, competition is an established norm or trait among individuals and business entities (Thiel, 2017; Wang *et al.*, 2018). *CB* portrays the intention and actions of individuals to outperform others within a given business environment (Wang *et al*, 2018). *CB* in itself is a frequently expressed trait encountered in every sphere of endeavor. Hence, competitive behavior has been a central theme in the management literature (De Waal-Andrews & Van Beest, 2018; Kuhlen & Tymuta, 2012).

Several studies have revealed that the phenomenon (*CB*) is closely related to performance outcomes as competitive individuals strive or tend to perform better than their contemporaries (Wang *et al.*, 2018; Wittchen *et al.*, 2013). Ganiyu (2019) asserted that *CB* is an entrepreneurial tendency that positively impacts on competitiveness and business performance of firms (Ganiyu, 2019). Among community pharmacists, pricing constitutes a major basis for competition This behavior is majorly aimed or targeted at attracting more customers and increasing patronage as a consequence (Matthew *et al.*, 2020; Jan *et al.*, 2015).

### *2.7. Job Performance (JP) Indicators*

In a hybrid business enterprise like a community pharmacy practice, performance evaluation is an essential process to ensure the continued existence and success of the business. Hence, there is the need to measure *JP* indicators such as sales revenue, profitability, shareholder value, market share, customer satisfaction, and cash flow (Robert & Charles, 2006; Cavicchi & Vagnoni, 2020; Crucke & Decramer, 2016; Akingbade, 2020). The competitive landscape in community pharmacy practice is increasing by the day. Hence, performance refers to the measures or metrics used to evaluate the achievement of business goals. *JP* refers to the capacity of community pharmacists to generate economic value, and profitability, minimize cost, maintain a customer base, and sustain revenue growth (Nitadpakorn *et al.*, 2017). Apart from ensuring adequate patient care and drug supply, the *JP* indices for evaluating a community pharmacist also include: ensuring profitability and productivity, expense control, use of technology, optimization of human and material resources, customer service expectation, and, revenue growth (Oamen & Lawal, 2023; Purbowo *et al.*, 2022; Jose *et al.*, 2022).

**H1**: *There is a positive effect of CB on the JP of community pharmacists*

### *2.8. Formative or Emergent Constructs (P_PT and G_CB)*

Emergent constructs play a role in elucidating concepts that are essentially from the constructivist perspective of the researcher who intends to achieve a specific goal (Schuberth *et al*., 2018; Schuberth, 2021) The emergent constructs are the linear

combinations of other variables which in the context of this paper are *PFN* and *PT* combined to forge *P_PT* while *GA* and *CTB* forging *G_CB* (Schuberth, 2021). The operationalization of the formative constructs was informed by the model of interpersonal behavior (Henseler, 2017; Triandis, 1977). *PFN* has been linked as a consequence of *PT* and professional development programs. This suggests that *PFN* attributes and competencies are developed from pharmacists' graduate, postgraduate, and informal training avenues (Lynch *et al.*, 2004). Hence, a formative construct of *PT* and *PFN* was forged to give *P_PF*. In the same vein, studies have shown that healthy group association dynamics create avenues for enhanced collaborative effort and profitability (Ma *et al*, 2018; Ibrahim *et al*, 2020). For instance, among academics, the positive effects of group membership were found to increase publication output through *CTB* (Kyvik & Reymert, 2017). These constructs provide the theoretical framework to forge a formative construct composed of *CTB* and *GA* to give *G_CB*.

**H2:** *There is a negative, significant moderating effect of group-collaborative behavior associations (G_CB) on the relationship between CB and JP.*

**H3:** *There is a significant moderating effect of P_PT, on the relationship between CB and JP.*

### *2.9. Model Specification*

The hypothetical model was developed using 2 (two) reflective latent variables and 2 (two) formative latent variables. *CB* is the main independent reflective variable, and *JP* is the dependent reflective variable. *PT* and *PFN* were forged to create an emergent or formative latent variable *P_PT* (professionalism-professional training). While *GA* and *CTB* created the formative latent variable- *G_CB* (group-collaborative association). Both *P_PT* and *G_CB* were used as moderator variables in the structural equation model. Hence, the direct effect of *CB* on *JP*, and the moderating effect of *P_PT* and *G_CB* on the relationship were empirically tested.

## 3. Method

### *3.1. Study Design*

A cross-sectional, questionnaire-based quantitative survey design was adopted using simple random sampling, Questionnaires were administered to six hundred and fifty-four (*N*=654) community pharmacists in southwestern Nigeria. The average population of community pharmacists in Southwestern Nigeria stands at 2,600 to 3,000 with Lagos state contributing more than 40% while Ogun, Oyo, Osun, Ekiti, and Ondo states account for approximately 1500 **(**Ekpenyong *et al*., 2018**).** Only community pharmacists with at least a minimum of one year of experience in community pharmacy practice were selected. Kock and Hadaya (2018) developed the inverse square root method to determine the optimum and reliable sample size for a structural equation modeling study. (Kock & Hadaya, 2018). Parameters were set at an assumed statistical power of 0.8, a p-value of 5%, and a path coefficient threshold of 0.2. The computed sample size was approximately 155. However, to improve the generalizability of findings, a sample size of 654 was obtained using a simple random sampling technique. Prospective respondents gave their consent before questionnaire administration.

### *3.2. Measurement of Variables*

The items used for measuring the constructs of the study (Table 1) were developed from the extant literature. The main independent variable of the study is *CB*, and the main criterion or dependent variable is *JP*. *CB* was measured using a 5-point Likert scale of *Always* (5), *often* (4), *sometimes* (3), *seldom* (3), and *never* (1). Also, *CTB* and *GA* were measured on a 5-point Likert scale ranging from *never* (1), *seldom* (2), *sometimes* (3), *often* (4), and *always* (5). *PFN* and *PT* constructs were measured using a 4-point Likert scale ranging from *strongly agree* (4), *agree* (3), *disagree* (2), and *strongly disagree* (1). The dependent outcome- *JP* was measured using a 5-point Likert scale structure- *very good* (5), *above average* (4), *average* (3), *below average* (2), and *very poor* (1).

### *3.3. Data Analysis*

Basic descriptive statistics were obtained using Statistical Package for Social Sciences version 25. A structural model was developed and validated to test hypotheses using WarpPLS version 8.0 (Kock, 2022).

### *3.4. Ethical Considerations*

Ethical approval for the study was obtained from the Department of Health Planning, Research, and Statistics, State Research Ethics Committee, Ogun state, Nigeria. The approval number is HPRS/381/477 dated 22nd July 2022. Prospective respondents gave their consent before questionnaire administration.

## 4. Results

### *4.1. Demographic Profile of Participants*

Out of 750 questionnaires administered, 646 valid responses were obtained. Respondents were composed of 55% male and 45% female community pharmacists. A majority of respondents were aged between 20 to 40 years (66.2%, n=433) and those between 41 to above 50 years (33.8%, n=221). About 34% (220) are single and married were 63% (n=413). Ownership status showed about 49.6% (n=326) sole ownership, 14.4% (n=94) partnership model, and 36% (n=234) pharmacists-managers. In terms of years of community pharmacy practice, 69.7% (456) had 1 to 10 years of experience, and 32.3% (198) had 11 to above 20 years of experience.

Table 2 shows the reliability estimates of the measurement model with CR, True composite, and Cronbach alpha estimates above the cutoff value of 0.6 to 0.7, considered acceptable values (Hair *et al.*, 2014). Hence, the research instrument has good internal reliability and consistency; establishing convergent validity. The model was assessed for collinearity with values below the baseline of ±5, hence multicollinearity concerns were eliminated. This shows that the variables are not too correlated with each other (Kock & Lynn, 2012).

Table 1 − Measurement of constructs and indicator items

| | Indicator items | Code |
|---|---|---|
| Competitive Behavior (CB) | I share pricing strategies with my colleagues | CBI |
| | I readily disclose my product-sourcing channels to my colleagues | CB2 |
| | I pool financial resources with colleagues to buy stock | CB3 |
| | I share new treatments and dispensing guidelines with my colleagues | CB4 |
| | I readily share my experiences and knowledge with my colleagues | CB5 |
| Source: Thiel, 2017; Wang *et al*., 2018; Matthew *et al*., 2020; Jan *et al.*, 2015 | | |
| Collaborative Behavior (CTB) | I refer clients to colleagues with specialist knowledge | CTB1 |
| | My colleagues sell to me at a discounted rate | CTB2 |
| | I share and discuss my business growth ideas and statistics | CTB3 |
| | I am willing to mentor new entrants to community pharmacy practice | CTB4 |
| | I assist colleagues in depleting short-dated inventory | CTB5 |
| | I recommend training opportunities to colleagues | CTB6 |
| | I engage in resource pooling with colleagues | CTB7 |
| Source: Morley & Cashell, 2017; Frisk *et al*., 2019; Allemann *et al*., 2014 | | |
| Group Association (GA) | We share key experiences in my professional group | GA1 |
| | We create avenues to support collaboration | GA2 |
| | Social media platforms support collaboration | GA3 |
| | Opportunities are available to share relevant practice experiences | GA4 |
| | I consider professional groups critical for effective collaboration | GA5 |
| | My interpersonal relationships with my colleagues improve collaboration | GA6 |
| Source: Goodluck *et al.*, 2016; Batten, 2017; Chiriac *et al.*, 2021; Assbeihat, 2016) | | |
| Professional Training (PT) | My undergraduate training supports collaboration with colleagues | PT1 |
| | I was taught the benefits of intraprofessional collaboration in school | PT2 |
| | I regularly engage in training workshops to improve my collaborative skills | PT3 |
| | My professional association organizes seminars and workshops to encourage a collaborative effort | PT4 |
| | I feel professional groups should drive collaboration-based values among community pharmacists | PT5 |
| Source: Jui & Wong, 2013, Emeni *et al.*, 2018; PCN, 2020 | | |
| Professionalism (PFN) | My job is more competence than capital | PFN1 |
| | I solve work problems creatively and quickly | PFN2 |
| | My physical appearance at work is very important to me | PFN3 |
| | I offer my professional service even if I am not compensated for them | PFN4 |
| | My communication skills are very important to my practice | PFN5 |
| Source: Adler *et al.,* 2008; Brante, 2010 | | |
| Job Performance (JP) | Growth of sales revenue in the last 1 year | JP1 |
| | Improvement in profitability in the last 1 year | JP2 |
| | Reduction of overhead and expenses in the last 1 year | JP3 |
| | Improved collaborative efforts with my colleagues in the last year | JP4 |
| | Improvement in work operations using technology | JP5 |
| | Accuracy and reliability of inventory management processes | JP6 |
| | Efficiency and effectiveness of daily work operations | JP7 |
| | Growth in my client's satisfaction in the last 1 year | JP8 |
| | Level of customer loyalty in the past 1 year | JP9 |
| Source: Cavicchi & Vagnoni, 2020; Crucke & Decramer, 2016; Nitadpakorn *et al.*, 2017; Robert & Charles, 2006; Oamen & Lawal, 2023 | | |

Source: Data analysis output from WarpPLS, 2023

Table 2 − Reliability, convergent, and multicollinearity measures of indicators and constructs

| Construct<br><br>Indicators | Factor loading | FCVIF | CR | Cronbach | TR |
|---|---|---|---|---|---|
| Professional Training (*PT*) | | 1.978 | 0.695 | 0.693 | 0.803 |
| PT1 | 0.409 | | | | |
| PT2 | 0.399 | | | | |
| PT3 | 0.576 | | | | |
| PT4 | 0.436 | | | | |
| PT5 | 0.448 | | | | |
| Professionalism (*PFN*) | | 1.203 | 0.702 | 0.701 | 0.817 |
| PFN2 | 0.410 | | | | |
| PFN3 | 0.428 | | | | |
| PFN4 | 0.438 | | | | |
| PFN5 | 0.436 | | | | |
| Group Association (*GA*) | | 2.259 | 0.864 | 0.863 | 0.898 |
| GA1 | 0.683 | | | | |
| GA2 | 0.628 | | | | |
| GA3 | 0.503 | | | | |
| GA4 | 0.645 | | | | |
| GA5 | 0.621 | | | | |
| GA6 | 0.655 | | | | |
| Collaborative Behaviors *CTB*) | | 1.545 | 0.806 | 0.804 | 0.857 |
| CTB2 | 0.458 | | | | |
| CTB3 | 0.483 | | | | |
| CTB4 | 0.556 | | | | |
| CTB5 | 0.494 | | | | |
| CTB6 | 0.578 | | | | |
| CTB7 | 0.603 | | | | |
| CTB8 | 0.540 | | | | |
| Competitive Behavior (*CB*) | | 2.226 | 0.809 | 0.789 | 0.856 |
| CBI | 0.708 | | | | |
| CB2 | 0.666 | | | | |
| CB3 | 0.608 | | | | |
| CB4 | 0.716 | | | | |
| CB6 | 0.684 | | | | |
| Job Performance (*JP*) | | 1.079 | 0.870 | 0.865 | 0.894 |
| JP1 | 0.603 | | | | |
| JP2 | 0.677 | | | | |
| JP3 | 0.462 | | | | |
| JP4 | 0.534 | | | | |
| JP5 | 0.689 | | | | |
| JP6 | 0.693 | | | | |
| JP7 | 0.755 | | | | |
| JP8 | 0.751 | | | | |
| JP9 | 0.694 | | | | |
| Composite Constructs | | | | | |
| *P_PT* | | 2.307 | 0.687 | 0.687 | 0.778 |
| *G_CB* | | 3.674 | 0.865 | 0.863 | 0.885 |

*FCVIF=full collinearity variance inflation factor, CR=composite reliability, TR=True composite
Source: Author's computation, 2023

Table 3 − Discriminant validity of model (Heterotrait Monotrait criterion)

| Construct | CB | JP | P_PT | G_CB |
|---|---|---|---|---|
| CB | | | | |
| JP | 0.160 | | | |
| P_PT | 0.531 | 0.313 | | |
| G_CB | 0.783 | 0.207 | 0.738 | |

*All HTMT values significant at $p<0.001$
Source: Author's computation, 2023

Table 3 used the Heterotrait Monotrait (HTMT) criterion for differentiating constructs to determine if the constructs measure different things or are truly independent. Attainment of values lower than the strict measure of 0.85, revealed the existence of discriminant validity (Henseler *et al.*, 2015). This shows that the constructs are uniquely different or independent of each other.

### *4.2. Evaluation of Model fit of the structural model*

The evaluation of how well the hypothesized model fits the data is essential in structural equation modeling. It enables the researcher to determine whether the hypothesized model fits the data. The quality of the structural model developed using WarpPLS can be ascertained using model fit indices such as the standardized squared root mean residual (SRMR) and square mean average residual (SMAR) both with an absolute benchmark of 0.1. The model had an SRMR value of 0.096, hence acceptable. Also, the SMAR value was 0.076 which lies within the limit of 0.1. The average full collinearity variance inflation factor (FCVIF) was 2.476 which lies within the range of =<3.3 and 5 (Hair *et al.*, 2017; Kock & Lynn, 2012). Hence shows the absence of multicollinearity.

The structural model in Table 4 showed a significant relationship between *CB* and *JP* ($p<0.01$). And the effect of the moderators (P_PT and G_CB) revealed a significant lowering or weakening effect of *G_CB* ($\beta=-0.103$, $p<0.01$) and an insignificant effect of *P_PT* ($p>0.05$).

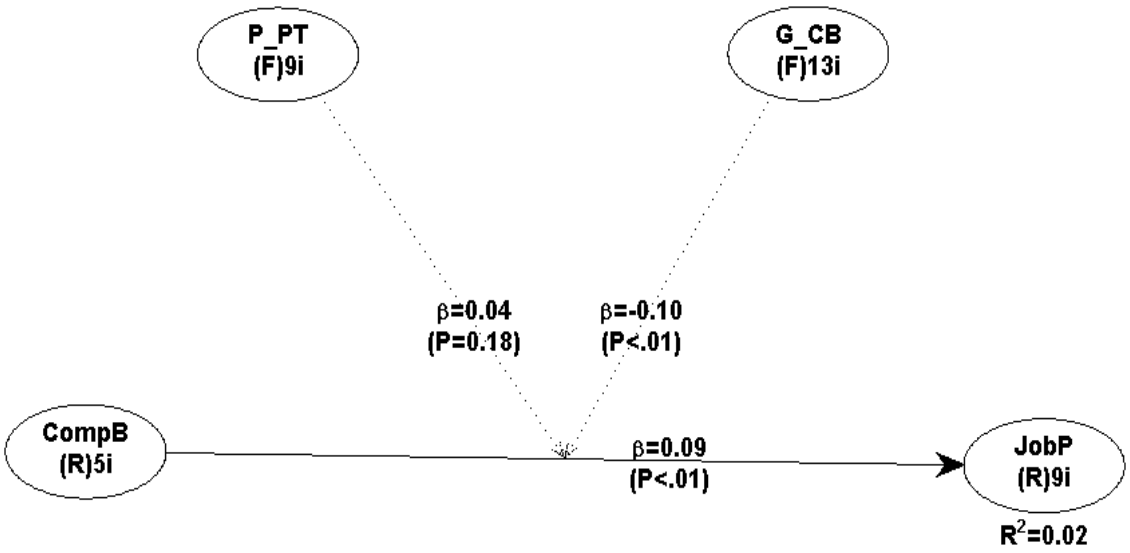
Table 4 − Path analysis of the structural model (hypothesis testing)

| Path | path coefficient (β) | p-value | Hypothesis | Inference |
|---|---|---|---|---|
| CB -------> JP | 0.092 | 0.009 | H1: supported | Direct effect |
| P_PT*CB ------>JP | 0.035 | 0.184 | H2: not supported | No moderation |
| G_CB*CB ----->JP | -0.103 | 0.035 | H3: supported | moderation |

*=interaction
Source: Author's computation, 2023

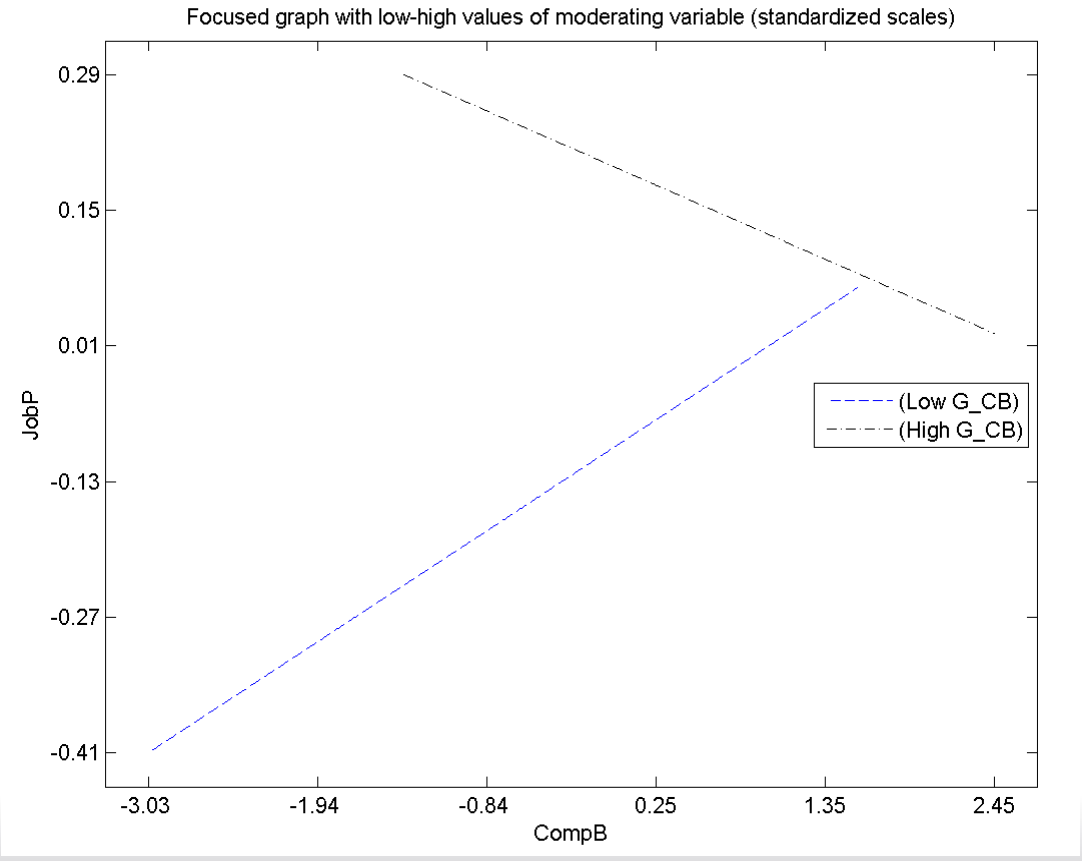
Figure 1 presents the structural model which shows the effects of *G_CB* on the relationship between *CP* and *JP*. *CB* positively and significantly affects *JP* ($\beta=0.09$, $p<0.01$). The moderating effect of *G_CB* was negative and significant ($\beta=-0.10$, $p<0.01$), while the moderating effect of *P_PT* on the causal relationship was insignificant ($\beta=-0.18$, $p>0.05$).

Figure 1− Structural model showing direct and moderating effects of constructs




Source: Data analysis output from WarpPLS, 2023
Note: the Causal effect is depicted with a solid line (----), and the Moderating effect is depicted with dashed lines (- - -). The 'R' letter represents reflective constructs while 'F' represents Formative or emergent constructs.

Figure 2 − Simple slope graph showing the Impact of Moderator (*G_CB* at low and high) on the relationship between *CB* and *JP*




Source: Data analysis output from WarpPLS, 2023

Figure 2 shows a graphical representation of the moderating effects of *G_CB* on the relationship between *CP* and *JP*. The results showed that at high levels of *G_CB*, the downward slope shows a weakening effect of *CP* on *JP*. However, at low levels of *G_CB*, the upward slope depicts a strengthening effect. However, *P_PT* did not have any moderating effect on the relationship between *CB* and *JP*.

## 5. Discussion

Using empirical evidence from a large sample, a structural model was used to examine the impact of contextual factors on the hypothesized relationship between *JP* of community pharmacists influenced by *CB* as well as explore the moderating effects of *G_CB* and *P_PT*. The implications and recommendations of the study to practice and policy were discussed.

### *5.1. Direct Effects of CB on JP*

From the study, the direct influence of *CB* on *JP* was significant ($\beta$=0.1, $p$<0.01) as depicted in Figure 1. This showed that higher levels of competitiveness among community pharmacists positively enhanced performance. Invariably, this finding is in harmony with studies that showed that individuals with strong individuals' competitiveness tend to show more productivity or perform better (Wang *et al.*, 2018; Wittchen *et al.*, 2013). Hence, *hypothesis H1 was supported*.

### *5.2. Simple slope analysis: moderating influence of contextual factors*

As shown in Figure 2, the moderating or intervening effect of *G_CB* on the relationship between *CB* and *JP* was examined in the study. An antagonistic interaction or moderating effect of *G_CB* is seen between low and high levels of *G_CB*. In the presence of low *G_CB*, there is a significant strengthening effect of the influence of *CB* on *JP*. Hence, *hypothesis H2 was supported.*

In other words, with a high level of *G_CB* (above the mean), there is a reduced or weakened influence of *CB* on the *JP* of community pharmacists. This implicitly suggests that in work environments where community pharmacists highly engage in collaborative and cooperative practices as a group, the tendencies for competitive practices to dominate business activities are significantly weakened. This means that performance is enhanced through cooperation, group effort, and group learning. This is corroborated by studies that showed higher performance when group collaboration exists (Ibrahim *et al.,* 2020). On the other hand, when *G_CB* is low (below the mean), there is a strengthening effect of *CB* on *JP*. This suggests that the impact of competitiveness on *JP* is stronger when community pharmacists exhibit individual competitiveness. This finding is supported by literature which shows that more competitive individuals tend to outperform their competitors (Wang *et al*., 2018; Wittchen *et al.*, 2013).

Therefore, the above findings imply that cooperation among professionals towards individual and collective benefit proffers more value than individual competitiveness. Hence, strengthening the narrative for community pharmacists to be more supportive of group effort through collaborative ventures, resource pooling, information sharing, client referrals, and partnerships to enhance consistent and sustained performance (Kyvik & Reymert, 2017; Oamen, 2023a). This aligns with the assertion of studies that showed the positive effects of group collaborative practices are usually evident in closed healthcare

settings where professionals (nurses, physicians, pharmacists, laboratory scientists, etc.) are best positioned to interact and collaborate within and between themselves as a group (Meijer *et al.,* 2016; Brown *et al.,* 2015). Furthermore, this is corroborated by the findings of a comparative study in southwestern Nigeria which affirmed that *CB* is an integral measure or indicator of how much collaboration exists among community pharmacists (Oamen, 2023b).

Therefore, despite the underlying commercial interests inherent among community pharmacists, the key performance objectives of enhanced profitability, improved market share, cost minimization, and customer satisfaction are more achievable when a supportive culture of collaboration exists. This is supported by current literature where the use of more group-collaborative efforts in educational and healthcare settings yielded positive outcomes (Assbeihat, 2016; Chiriac *et al.*, 2021; Gobis *et al.*, 2018). In the same vein, it is recommended by Matic (2022), that managers should harness the right interpersonal attributes to enhance cooperation and improve performance at work (Matic, 2022).

However, the findings of the study showed that *P_PT* did not show any significant effect on the relationship between *CB* and *JP*. Hence, hypothesis *H3 was not supported*.

Furthermore, the absence of a moderating effect of *P_PT* presents a set of implications for the state of current practice: Firstly, it indicates that professional training and professionalism do not necessarily influence the competitiveness of community pharmacists; secondly, the extent of training per se does not play any implied role in the relationship between the community pharmacist and his job performance. Thirdly, it suggests an apparent gap in the training of pharmacists in terms of how to appropriate business competitiveness in the work environment, thereby supporting group cooperation efforts and less on individual competitiveness.

### *5.3. Implications of findings to practice and policy*

As evidenced by the study outcomes, it has been identified that group collaborative efforts channeled towards enhancing performance for community pharmacists in Nigeria are not in common practice. Therefore, a shift of focus from monetary goals (the basis for high competitiveness) to a more collaborative culture would impact positively performance.

Thus, reducing emphasis from individual competitiveness to adopting cooperative, collective, and collegial behaviors would enhance performance. In the same vein, the apparent absence of the impact of the synergy of professional attributes and training (*P_PT*) on the influence of *CB* on *JP* presents some implications for pharmacy education and management. Training at the level of undergraduate and graduate training will provide the needed orientation and foundation to support the appropriation of competitive practices among community pharmacists.

### *5.4. Recommendations*

Therefore, the findings of the study recommend a paradigm shift from individualistic competitiveness to more group-linked approaches to the working principles of community pharmacists. Therefore, practices such as resource pooling for bulk purchasing, exchange of practice ideas and information, and incentivized group learning opportunities should be encouraged among community pharmacists (Chiriac, 2014). The study recommends incorporating academic courses in professionalism and cooperation in community pharmacy practice into the undergraduate and graduate curricula of pharmacy students. This would provide needed knowledge exposure and foundation to adequately bridge the practice gap.

### *5.5. Limitations and Future Research Recommendations*

The study requires a longitudinal study design to further expand generalizability. The study focused on community pharmacists in southwestern Nigeria, hence study findings should be used with caution. Although contextual factors improved our understanding of the study, it was restricted to the constructs used in the study. Therefore, future research work should focus on exploring more constructs to further broaden the scope of inference from the study.

## 6. Conclusion

The study affirms the attenuating effect of high levels of collaboration and group association on the influence of *CB* on *JP* using the theoretical framework of interpersonal behavior. According to the study, high group collaboration (culture) reduces the exhibition of competitive tendencies and its effects on *JP*. The non-significant construct *P_PT* from the viewpoint of training suggests the inclusion of collaborative practice in the curriculum of pharmacy schools in Nigeria. This may probably extend to other pharmacy schools in a global context. Such measures will potentially strengthen collaborative practice behavior among pharmacists themselves and with other healthcare professionals. A clear emphasis on a collaborative work approach is a recommended focus for professional groups and associations irrespective of discipline. Finally, the study provides empirical evidence to show that contextual constructs tend to influence the *CB* of community pharmacists which invariably impacts on their performance.

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