



Are Current SERVQUAL Dimensions Applicable for Measuring Service Quality within the Scottish Emergency Services?

Deborah Bruce

School of Computing, Engineering and Physical Sciences
University of the West of Scotland (UK)
Email: Deborah.Bruce1@outlook.com

Michele Cano

University of the West of Scotland (UK)
Email: Michele.Cano@uws.ac.uk
Corresponding Author

Evi Viza

School of Computing, Engineering and Physical Sciences
University of the West of Scotland (UK)
Email: Evi.Viza@uws.ac.uk

Abstract

Purpose. The purpose of this study is to understand whether the SERVQUAL tool could be applied to measure internal service quality in the Emergency Services and examine what internal customers of this sector view as essential elements of service quality.

Methodology. A qualitative approach, focus groups with 8 participants from police and ambulance services, was used to collect data as part of the research.

Findings. The findings of this primary research revealed that the concepts of service quality and the internal customer were not widely understood within this sector. The results also indicated that the current dimensions of service quality did capture the essential characteristics of internal service quality within the emergency services with assurance and empathy featuring heavily.

Practical Implications. The results indicate that an adapted version of SERVQUAL with additional dimensions of 'wellbeing; and 'resourcing' can be successfully utilised for measuring service quality in the emergency services.

Originality/ value. This work adds contribution to existing knowledge in Service Quality research within the emergency services and will be of value to professionals and researchers in this field.

Keywords

SERVQUAL; Emergency Services; Service Quality

1. Introduction

Service quality is critical to the success of an organisation however is very difficult to evaluate (Black, Briggs and Keogh, 2001). It has been defined as providing something intangible to a consumer in a way that pleases them and gives value to that consumer (Bryceland and Curry, 2001; Jayasundara et al., 2010). When first exploring service quality and developing the tool SERVQUAL, Zeithaml *et al.* (1990) concluded that the key to ensuring good service quality was to meet or exceed what customers expect from the service, later defining Service Quality as “the discrepancy between customer’s expectations and perceptions” (Zeithaml *et al.*, 1990, p.19).

Since the measurement tool SERVQUAL’s introduction, it has been studied extensively and boasts to being able to be applied to both internal and external customers with some modification (Zeithaml et al., 1990). This tool provides not only an assessment of customer views but also aims to identify their expectations of what service quality should be (Wisniewski and Donnelly, 1996). Criticisms of the tool however include its transferability across sectors (Reynoso and Moores, 1995), with many authors identifying several different dimensions on which to measure quality of service against.

First response services is one sector which is now recognising the benefits of striving to deliver the best in service quality to their service users. The measurement of service quality of this sector adds another challenge, as these services are often ‘experienced’ as opposed to goods that are purchased. Furthermore, employee satisfaction is understood to be as important as customer satisfaction in influencing organisation performance (Chen et al., 2006). It has been discussed that internal customer needs must be met before external customer needs can be met (Gremler et al., 1994) with fulfilled employees having increased morale and working more efficiently and effectively (Eskildsen and Dahlgaard, 2000). Like external customers, internal customers also engage in a number of service encounters to satisfy needs in the course of carrying out their duties (Kang et al., 2002). This could not be more important than when considering the work carried out by emergency services.

With around 220,000 front line emergency services staff in the UK, as indicated in table 1, the needs of these internal customers, attending emergency incidents and providing emergency care, are important in providing service quality.

Table 1. Emergency Services Employee Breakdown

Emergency Service Employees	United Kingdom	Scotland	Total number of employees in Scotland
Firefighters (whole-time operational)	32,000	3,546	7,776
Paramedics	23,000	1,300	4,500
Police Officers (FTE)	165,000	17, 172	23,000
Total	220,000	22, 018	35, 276

Source: Statista 2017a; Statista, 2017b; Scottish Government, 2018; Scottish Fire and Rescue Service, 2018; Wikipedia, 2018

Adapted SERVQUAL models have previously been applied to the education sector (Chen et al., 2006) and government services such as leisure and housing (Wisniewski, 2001) to measure external customer service quality. There have also been studies on work-related wellbeing, psychological health and occupational stress in the emergency services (Brough, 2005; Taylor and Westover, 2011). There appears, however, to be little significant research on whether the three emergency services, are meeting the needs of their employees at a service quality level.

The aims of the research presented were to

1. examine whether SERVQUAL could be adapted successfully to measure internal service quality within the Police, Fire and Ambulance Service
2. explore whether dimensions already steering the SERVQUAL model are appropriate for use in the emergency service's environment
3. explore what the internal customer views as essential characteristics of service

2. Literature Review

2.1 Service quality and its defining characteristics

A customer's expectations of a service can be formed from any number of things, such as communication with others, their personal need for that service, past experiences of that service or external communication from the service provider itself (Zeithaml et al., 1990).

It is understood that Service Quality centres around intangibility and the holistic service experience as opposed to product based. When researching this topic initially, Zeithaml *et al.* (1990), attempted to capture a set of dimensions that customers used to evaluate and shape their expectations and perceptions of service quality. Initially a group of ten dimensions were identified, later shortened to five - Tangibles, Reliability, Responsiveness, Assurance and Empathy. Whether or not these dimensions capture service quality, and their applicability to employees of the emergency services, has yet to be considered in literature.

2.2 The Service Profit Chain

The service profit chain, presented by Heskett *et al.* (1997) establishes a relationship between employee service quality, customer satisfaction and profitability, and company growth. They discuss that by giving employees the adequate tools to serve customers, rewarding staff, ensuring a high level of communication and considering staff capability thus creating value, this directly links with service quality and productivity leading to customer satisfaction, loyalty and eventually revenue growth. The investment in employees will enable organisations to meet customer's needs.

Service organisations today are striving to deliver quality service and building loyalty among employees and customers, with employee satisfaction improving productivity, a reduction in staff turnover and enhancing creativity (Ramseook-Munhurrun, *et al.* 2010). To deliver this service quality, internal customer service must also be of the right quality (Wisniewski, 2001). In providing high levels of service to internal customers, organisations can attain a more effective performance, lower waste and lower costs (Marshall *et al.* 2007).

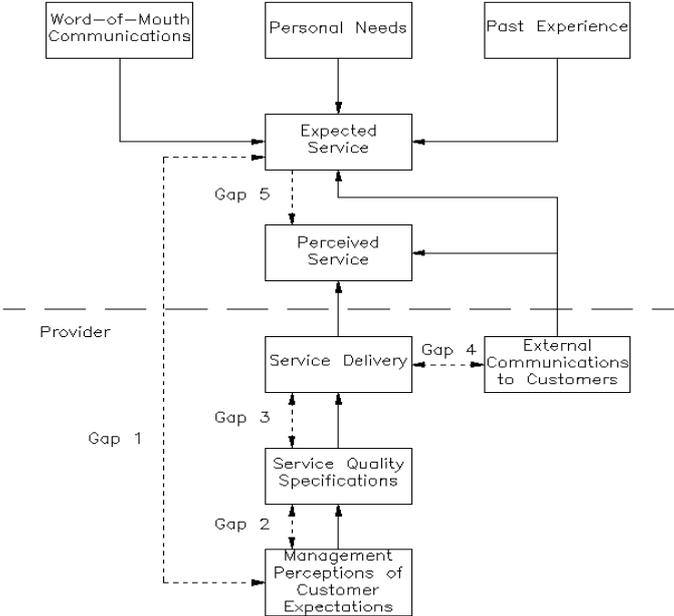
In service organisations the internal customers behaviour takes on even greater importance due to the high level of contact between the external customer and the internal service employee (Dotchin and Oakland, 1994). Without satisfied and motivated employees, it becomes impossible to achieve satisfied customers (Eskildsen and Dahlgard, 2000).

Bouranta *et al.* (2015) attempted to measure police officer satisfaction and citizen satisfaction of their police force in Greece. This provided multi-dimensional results however, with male police officers indicating dissatisfaction in their roles but citizens indicated general satisfaction. This was found to correlate with gender as female police officers showed increased satisfaction but both young and male citizens indicated general dissatisfaction in their force. It was recognised in this study that similar research surrounding satisfaction of police officers was lacking.

2.3 SERVQUAL’s applicability in the public sector

SERVQUAL, is a multi-scale item used by organisations to better understand and measure the service expectations and perceptions of customers across the five service quality dimensions as proposed by Zeithaml *et al.* (1990) and can be used as a starting point for assessing and improving service quality (Parasuraman *et al.*, 1991). In the development of the SERVQUAL tool, Zeithaml *et al.* (1990) identified five gaps, or themes. Gap 5 is the service quality shortfall perceived by the customer, and gaps 1 to 4 are the possible shortfalls on the part of the service provider that contributes to Gap 5. Figure 1 below presents the gap model.

Figure 1. Gap Model



Source: Zeithaml *et al.*, 1990

SERVQUAL has been extensively researched over the last few decades and since its development has been applied to a multitude of industries with varying levels of success. Its gap analysis and weighted approach successfully highlights performance levels and aids organisations in prioritising services and improvement initiatives by understanding the customers views over time (Bryslund and Curry, 2001).

In terms of transferability, research conducted by Brysland and Curry (2001) into the use of SERVQUAL on internal customers of North Lanarkshire council in Scotland determined that the SERVQUAL tool could be applied successfully to internal customers with appropriate adaptation. Due to the success it was also concluded that this tool could be used successfully as a strategic planning tool, broadening its use. Its transferability however, into the emergency services and further research on internal customer reliability, is still scarce.

Black *et al.* (2001) question the validity of the five dimensions as it moves away from the commercial sector. Chowdhary and Prakash (2007) further argue that it may not be possible to generalise these dimensions across all service types. However, the creators themselves do point out that, although minor modification in wording in order to adapt it to a particular setting is acceptable, deletion of items can affect the integrity of the scale (Parasuraman, *et al.* 1991).

Due to a distinct lack of research focusing on internal service quality measurement for the emergency services, a wider literature search was conducted encompassing the UK and beyond. Several studies identified a number of dimensions essential when measuring internal service quality, Table 2. However, Mohammadi-Sardo and Salehi, (2019) found that tangibles was the most effective dimension in patient satisfaction with empathy as the least effective.

Table 2. Internal Dimensions

		Dimensions																					
		Tangibles	Reliability	Responsiveness	Assurance	Empathy	Value for money	Pay and benefits	Respect	Organisational vision	Management Systems	Result feedback and motivation	Competence	Communication	Courtesy	Access	Promptness	Helpfulness	Professionalism	Confidentiality	Flexibility	Preparedness	Consideration
References	Brysland and Curry (2001) Council	√	√	√	√	√	√																
	Chen et al., 2006	√						√	√	√	√	√											
	Reynoso and Moores (1995) Hotel		√	√		√							√	√	√	√							
	Reynoso and Moores (1995) NHS Hospital	√	√											√			√	√	√	√	√	√	√
	Kang et al., 2002	√	√	√	√	√																	

Source: Authors' elaboration

2.4 SERVQUAL's use in Emergency Services

The concept of the customer takes on slightly new meaning when considering the emergency services. Organisations such as Scottish Ambulance Service, Police Scotland and Scottish Fire and Rescue provide a service to the public however their customers have no choice but to use them in times of crisis, making loyalty difficult to measure from an external customer perspective. A person may indeed never need to call on their service but has to know they are there. This is also true from an internal customer perspective, with employees having little or no choice in terms of alternative suppliers (Nagel and Cilliers, 1990, cited in Gremler *et al.* 1994).

SERVQUAL examples in emergency services are not widely published. There was the establishment of an employee satisfaction model in South Yorkshire Police (Fosam *et al.* 1998, cited in Chen et al., 2006) however, this focused on satisfaction and not service quality. This model indicated that job satisfaction, employee morale, colleague's morale, perceived

service quality, perceived public view, communication, training, resources and career development, all contributed to overall employee satisfaction.

In Scotland, Audit Scotland conducted a pilot study where SERVQUAL was implemented in a number of services within several councils. Areas included catering, building and development control, ground maintenance, housing, leisure and library services. This focussed on external customers and utilised the 5 original dimensions. Reliability featured heavily with negative gap scores. This study concluded that Public Sector service managers found the gap and dimension approach “conceptually attractive and operationally useful” (Wisniewski, 2001, p. 386). This is a very positive note for utilising this tool in other public sector services such as the emergency services.

A previous study in 2006 undertaken by Donnelly *et al.* (2006) aimed to research the applicability of SERVQUAL in assessing police service quality and to identify service quality gaps. This was implemented in legacy force Strathclyde Police. This study focused on the external customer utilising elected representatives, namely councillors, to participate in the research. It also applied the SERVQUAL tool to police officers to measure their understanding of customer expectations. For external customers reliability and responsiveness produced the poorest score. For police officers however and their understanding of customer expectations it was found that police officers had a good understanding of service quality and the expectations of their customers but identified a score of +2.8 for Gap 2, service quality specifications and management perceptions, indicating a shortfall in formalised service quality performance standards (Donnelly *et al.*, 2006). Scores of +3.0 for gaps 3 and 4 (with +6.0 indicating the highest possible gap score), as a result of shortfalls in Empathy and Reliability dimensions indicated police officers felt they are consistently unable to meet promised standards, causing frustration and low morale. Donnelly *et al.* (2006) indicated that in its application to policing the SERVQUAL tool could be further refined to increase its validity and reliability.

The literature review and empirical evidence indicate that internal service quality tools should be considered as a critical area of improvement for the emergency services in Scotland.

3. Methodology

Primary, qualitative research was the approach adopted in the study. The main aim of the study was to understand what employees wanted and expected from their organisation and the issues faced by them to address whether current standardised measurement tools, namely SERVQUAL, would be beneficial for emergency service to adopt and address service quality gaps identified in the literature.

It was essential to be aware that for research involving an organisation it is vital to understand the organisational context in which the research is undertaken, (Saunders *et al.* 2012). For this reason, focus groups was the main data gathering method.

In developing the questions for the focus group, the researcher was guided by the literature review and the structure of the questions was taken from the advice of Krueger (1998) and split into 8 sections.

Section 1 and 2 consisted of an opening and introductory question where the researcher would gain an insight into service level and participants understanding of service quality.

Section 3 was a transitioning question moving the discussion on to what the participants would evaluate service quality against. Section 4 consisted of key questions. These were critical as they would indicate what services, as internal customers, the participants expected to be provided with. This question was also completed with the use of a poster board to get the participants interacting in a slightly different way and to have them thinking deeply about what services they expected. It was also a way in which they could reflect and journey back to this question throughout the remainder of the group.

Sections 5, 6 and 7 consisted of Ending, Summary and Final questions respectively, designed to begin bringing the conversation to a close and aid reflection on previous questions. The researcher wished to explore, given the expectations of employees and services deemed important, what the employees believed the organisations should be measuring to ensure they achieved these.

The focus groups took place in neutral locations and were completed within a period of two weeks. Agreement and ethical approval was received for Police Scotland and the Scottish Ambulance Service, limiting the research to these two groups. A further limitation was due to the nature of the roles the respondents were employed in, shift patterns meant that many respondents who had previously indicated willingness to participate in the study were unable to attend at the times and dates set. The participants consisted of police officers, paramedics and ambulance technicians, current or retired, with 8 participants finally being selected to participate in the focus groups, giving 2 population groups with one focus group per service.

4. Results

4.1 Profile of Participants

Of the two population groups, one consisted of current employees of The Scottish Ambulance Service and the other current and previous employees of Police Scotland.

The ambulance service volunteers consisted of four male participants; two ambulance technicians and two paramedics, with service duration ranging from 15 to 29 years.

Police service volunteers consisted of one male and three female participants of different ranking including a previous employee. Respondents 1 to 4 are concerned with members of the Ambulance service and Respondents 5 to 8 are concerned with members of the Police service.

4.2 Awareness of Service Quality

Ambulance Service

Most respondents from this service were not aware of Service Quality within the organisation, with one indicating that they were only aware of it now and again, more often when a negative issue had arisen.

Respondent 2 – *“you get to be aware now and again, when problems arise”*

Respondents had participated in staff surveys in the past, but it was not something that was discussed within the field.

Police Service

Respondents from this service were not aware of Service Quality within the organisation. One respondent indicated they were not aware of the term ‘service quality’ but were aware of positive work being carried out by the organisation in terms of wellbeing, mental health and work life balance.

4.3 Important Factors when evaluating service quality

Ambulance Service

Resourcing and training were strong emerging themes. With resources being critical it was important to keep training up to date in order to improve skills and confidence as often second opinions were not possible – example within a rural area which may not be representative. Training was of a good standard but a willingness to be increased was expressed.

Respondents also highlighted the importance of equipment maintenance and fit for purpose vehicles for maintaining service levels.

Police Service

Similarly, respondents from the police service believed that appropriate resourcing was essential for good service quality as well as an understanding of capacity. This was essential from a supervisory point of view as well as at a front-line service point of view as this affected responsiveness to incidents and wellbeing of staff.

Respondents indicated that it was the volume of work that incidents were generating which was affecting them. This imbalance was having a wider impact with officers indicating that existing legal procedures requiring them to attend court, had an adverse effect on work life balance.

Respondent 8 – “the harder worker you are and the more proactive you are; the more work you generate”

Public events also impacted on resources as they were frequently required to police these events often on days off.

Equipment emerged as a critical factor when the respondents considered service quality. Respondents indicated a potential lack of provision of vehicles or computers could impact on making basic duties difficult to carry out such as enquiries and report writing. A positive highlighted was that uniforms and personal protective equipment was readily available.

Bureaucratic processes and internal procedures were discussed, with respondents believing this impacted on wellbeing. They believed these processes impacted on the way they were viewed by the general public and contributed to a lack of respect towards their profession.

4.4 Expected Services

Ambulance

Services expected centred around employee welfare and training services. Respondents wanted to be viewed as “important as the patients” with forward planning considered. Again, equipment was discussed with respondents seeing this as an essential element of what they expected from the ambulance service.

Police

Respondents from the police service expected basic services such as adequate equipment and resource planning to enable them to do their day to day job.

Salary also featured here with respondents wishing to be paid in line with their duties. It was indicated that employees were encountering more financial strain than they had done in previous years. Wellbeing services also featured heavily with respondents indicating positive working relations, emotional support and respect was something they required and valued seriously.

4.5 Employees expectation of Organisation

Ambulance

For employees, providing them with support and resources was a must. Respondents said that ‘on call’ shifts negatively impacted on health with employees completing a 12-hour day shift and being expected to be on call throughout the night. Although the organisation had put procedures in place enabling employees to contact their organisation and sign themselves off duty due to fatigue, respondents from the rural areas felt this blanket approach did not apply to them and the guilt felt by leaving the area unmanned was stronger than their views towards their own health. An important finding was the differences in geographical areas covered had an effect on service quality through resources and training available.

Police

Training and competence were main expectations of respondents. Respondents felt that the constant change in processes affected their competence to be successful in their roles and training was important in helping to meet this expectation. Respondents discussed the use of e-learning, which was a blanket approach of rolling training out, was not a suitable learning mode for all staff. This could mean that respondents in back office roles, who were often not utilising these skills, still had to be competent in them at all times.

Courtesy of employees was also expected from both management and fellow front line colleagues. Employees expected police service management to be able to recognise strengths and weaknesses in their own staff and pair skills and personality accordingly. Highlighting the success of this Respondent 5 noted “...I used to go out each night and cry in the car after each shift and I nearly quit. I then got a new tutor and it was like night and day”

Respondents were aware that this had an impact on resources however indicated that in order to marry up like-minded people in a positive and supportive way, it was necessary.

4.6 Measurement of Internal Service Quality

Ambulance

Respondents believed their organisation should consider absence management by considering the reasons employees were absent from work. It was important to respondents that the ambulance service considered their health and wellbeing in a broader sense and considered age of their employees. Respondents indicated the physical aspects of the job became much more difficult the older they got, and tasks became more difficult with more opportunities for error or injury. Employee engagement was also discussed at length with respondents indicating a need for management interaction. Communication was discussed as respondents stated that, at times, they were unsure about who to approach within the management team as a result of changes in management structure. Participants also wanted more say in front line equipment selection and wanted management to recognise the importance of emotional wellbeing of employees.

Police

Attendance, wellbeing and morale featured heavily here with respondents wishing the organisation to consider measuring this as a way to improve service quality for employees. Instead of looking at absences on an individual basis, respondents wished the organisation to attempt to understand the root causes of absences. This was not dissimilar to what was communicated by the respondents of the ambulance service. This attendance management also extended to re-rostered rest days for court appearances with respondents also indicating they were required to verify they had remained on duty on being stood down from court. Respondents indicated this level of scrutiny affected morale.

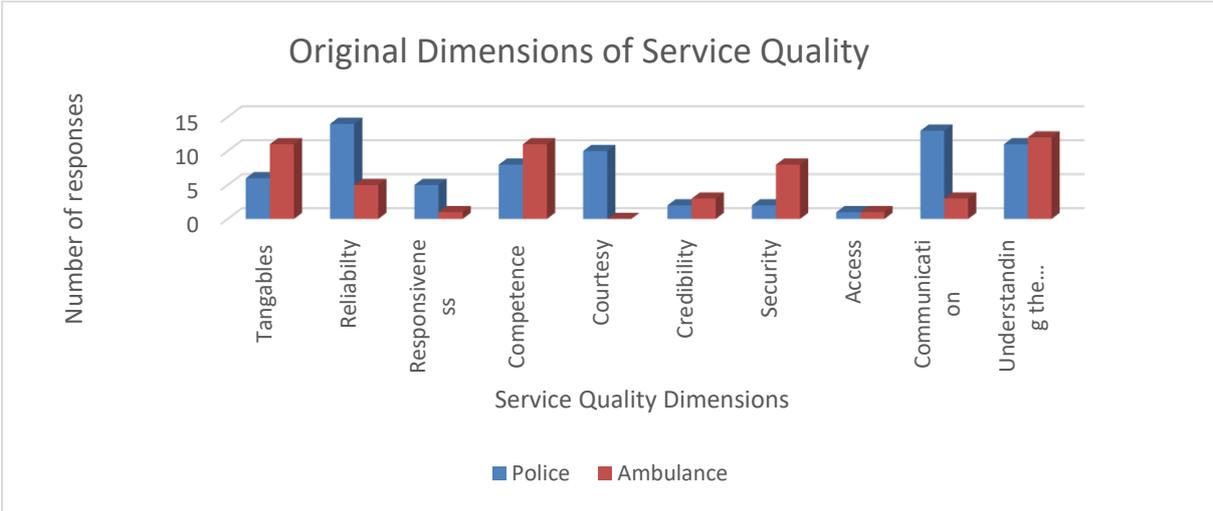
The re-rostering of rest days was also discussed to impact on family life and mental health impacting negatively on officer's wellbeing. Respondents again wished the organisation to look at wellbeing from an extracurricular approach, with employees interested in organisational sports teams to be given time to engage in such activities as a way to increase wellbeing. Employees indicated they could not engage in sports on behalf of the organisation without this impacting negatively on their rest days.

4.7. Comparative case results

From the data it was found that respondents from the police service considered reliability, communication and understanding the customer to be pertinent when considering internal service quality. Credibility, security and access featured less. Respondents from the ambulance service considered tangibles, competence and understanding the customer to be an expectation of internal service quality. Courtesy did not feature at all from the coding for ambulance staff, although this did feature highly for police staff. Once again access features less as well and responsiveness.

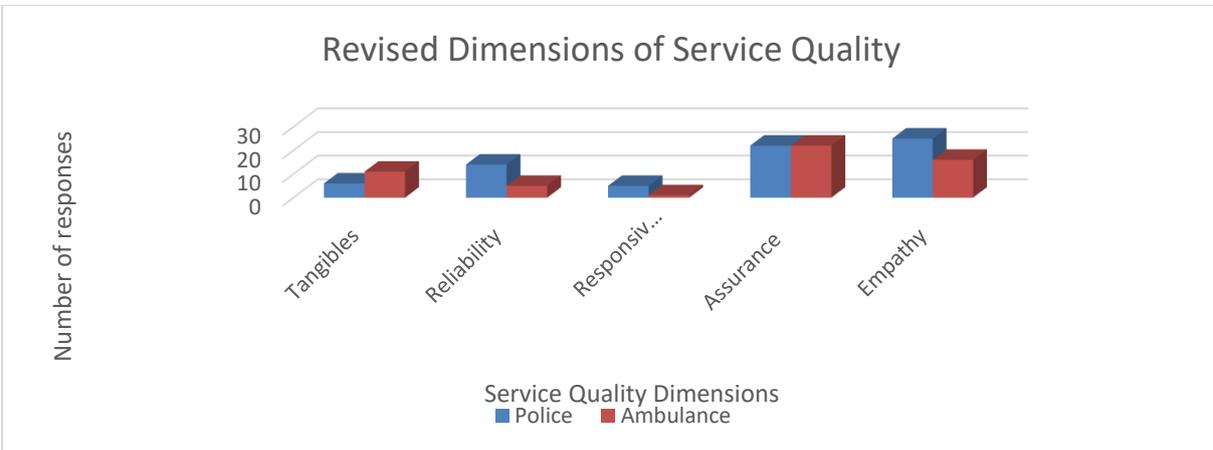
This grouping of themes indicated that both Assurance and Empathy feature highly for employees of both population groups when considering internal service quality from their employer. Grouping of results is shown in Figures 2 and 3

Figure 2. Original dimensions of Service Quality in Emergency Services



Source: Zeithaml et al., 1990

Figure 3. Revised Dimensions of Service Quality in Emergency Services



Source: Zeithaml et al., 1990

In summary, employees of the emergency services found it difficult to identify themselves as customers and were unfamiliar with the concept of service quality. The respondents’ expectations and perceptions of service quality however did fall into the broad set of service quality dimensions as outlined by Zeithaml *et al* (1990) with competence and reliability featuring heavily. There was a good indication of positive culture with the Scottish Ambulance Service in relation to courtesy however this was lacking within the police service. Training resourcing and wellbeing were identified as being essential characteristics of service quality for both population groups indicating this would be a good starting point for the

emergency services sector. Current SERVQUAL dimensions do appear to be applicable to the emergency services at this early stage of research, however with the prevalence of resourcing and wellbeing it may be advantageous to explore these two fields as dimensions in their own right.

5. Conclusions and recommendations

Previous studies capturing the emergency services, namely police, focused on employee satisfaction as opposed to service quality and studies utilising SERVQUAL focussed on external customer measurement as opposed to internal measurement. Others, applied to the general public sector, adopting a more quantitative approach by implementing modified SERVQUAL models in the first instance, with no information detailed as to whether SERVQUAL was truly capturing the needs of this unique sector.

A main finding from the literature was that SERVQUAL could be transferred to measure internal service quality with appropriate adaptation in wording (Parasuraman et al., 1991) and the identification of additional dimensions when moving industry (Bryceland and Curry, 2001; Chen et al., 2006; Reynoso and Moores, 1995; Kang et al., 2002).

5.1 Can SERVQUAL be adapted successfully to measure internal service quality within the Emergency Service?

From what respondents disclosed it is clear that service quality is not widely discussed within the Ambulance and Police Service. Results indicate that although respondents are aware of employee engagement of various forms, they are not aware of the concept of service quality nor seem fully aware of the rights and responsibilities of both them and their organisations as internal customers. When considering points raised in the literature by Donnelly *et al* (2006) and Chen *et al* (2006) pointing out that respondents can have difficulty answering the SERVQUAL questionnaire, the researcher can conclude from the results that this would appear to be the case at this early stage of the research. Before the implementation of any standardised method of service quality measure, organisations would need to invest appropriate time and energy in ensuring employees were aware of the concept of service quality and of their place within the service profit chain.

When considering the 10 dimensions that SERVQUAL covers and the 7 criteria of good service quality as highlighted by Gronroos (2000) from the results it seems that respondents value the same criteria as the external customer. This also backs up the study by Gremler *et al* (1994) who concluded that service encounters led to the same level of satisfaction or indeed dissatisfaction in both internal and external customers. The results show us that this is indeed the case for both organisations with respondents raising factors in keeping with these criteria. In light of this finding, it would be beneficial for the emergency services identified to consider focussing on internal service quality.

5.2 Are dimensions already steering the SERVQUAL model appropriate for use in the emergency service's environment?

Many of the expectations and perceptions of the service quality fell into the set of dimensions proposed by Zeithaml *et al* (1990), with some more prevalent than others.

Competence and Reliability feature heavily with both populations. Competence in particular centred around training however many respondents focused on their own competence rather than colleagues. Respondents expected to be trained more often using a classroom based approach and felt the 'one size fits all' online training was insufficient for their roles and duties required. This dimension does seem valid, however may require rewording to ensure appropriate data was captured by the organisations in question. Respondents of the police service felt that an increase in volume of work could affect service quality levels. The reliability dimension was found to impact on morale and wellbeing.

An unexpected result born from respondents of the Scottish Ambulance Service was the lack of responses relating to courtesy. It is unclear at this stage whether employees of this particular organisation value this dimension less than others or whether it is viewed and experienced very positively within the organisation and respondents do not feel they need to comment on it.

Respondents from the police service on the other hand viewed this as important with many issues raised in relation to courteousness and politeness of staff. Respondents felt that colleagues from other divisions and departments were not always perceived as willing to work in partnership, and the organisation could improve on rewarding good work.

5.3 Exploring what the internal customer views as essential characteristics of service

Respondents of the Scottish Ambulance Service care greatly about how they are perceived by the public and this is shaping the way they carry out their duties. As a result of this they expect training and resourcing to be essential characteristics of service quality. Respondents from this service want to feel confident in their roles and indicate training is good however is just not regular enough.

Wellbeing is also a main consideration of the Ambulance service respondents. Respondents indicate that pressures on resources affect their health with respondents feeling guilty about booking off legitimate fatigue time or not having the opportunity to move into less intense and physically demanding roles as they age. It is recognised that fatigue time is a positive aspect of the organisation's attempt to address wellbeing despite not always being taken up.

This is the same case for respondents of the Police Service. Resourcing is heavily impacting on work life balance, wellbeing and morale.

Training was discussed and respondents of the police service were similar in their expectation that training should be a main focus of the organisation on their path to service quality. It was agreed that the online method of delivery was at times not suitable for all staff, however a main point raised here was the frequency of changes within the service.

Wellbeing appeared to be impacted by most other dimensions and respondents on both sides saw this a pertinent expectation of their organisations. Respondents of the police service

had slightly different views again on this, indicating that services were in place and spoke very highly of rehabilitation centres.

5.4 Identifying new or confirming current applicable SERVQUAL dimensions

In light of the qualitative results the researcher of this study would deduce that the current SERVQUAL dimensions *are* applicable to the emergency service at this early stage of research.

From the results however, it may be also beneficial to consider the study by Chen *et al* (2006). The quality attributes identified in this research for internal service quality of academic staff do appear to have a place in this current research. Three of the dimensions identified by Chen *et al* (2006) specifically, pay and benefits, organisational vision and result feedback and motivation have all been raised by both population groups and perhaps have a place in further research of this nature.

Resourcing and wellbeing also seem to be key as although discussion around these areas fit into the current SERVQUAL dimensions it may be useful to reword certain dimensions. Many responses relating to health, wellbeing and morale were placed under the dimension of 'understanding the customer'. It may be useful to reword this dimension to capture this important topic. Resourcing issues also feature heavily under the reliability dimension with respondents indicating that lack of resourcing leaves them often unable to perform the promised service dependably and accurately. From an internal service quality perspective, it may be beneficial to rework this dimension to capture resourcing.

In considering the results and limitations of the current study the following recommendations for further research have been made;

- Further research involving the Fire Service would be extremely beneficial to gain an understanding of issues faced in this sector.
- A wider study encompassing a larger population group is required.
- It would be useful to understand management expectations and perceptions of service quality to address whether dimensions change for this sub group.
- Further research specifically on the SERVQUAL tool is needed within the Emergency Services to understand further its transferability and reliability in this sector.

References

Black, S., Briggs, S. and Keogh, W. (2001) Service quality performance measurement in public/private sectors. Managerial Auditing Journal. [Online] Vol.16(7), pp. 400-405. Available: Emerald Insight. [Accessed: 25 July 2018].

Bouranta, N., Siskos, Y. and Tsotsolas, N. (2015) Measuring police officer and citizen satisfaction: comparative analysis. Policing: An International Journal of Police Strategies & Management. [Online] Vol.38(4), pp.705-721. Available: Emerald Insight. [Accessed: 18 June 2018].

Brough, P. (2005) A comparative investigation of the predictors of work-related psychological well-being within Police, Fire and Ambulance Workers. New Zealand Journal of Psychology. [Online] Vol.34(2), pp.127-134. Available:

<http://www.psychology.org.nz/wp-content/uploads/NZJP-Vol342-2005-6-Brough.pdf>
[Accessed: 15 March 2018].

Bryceland, A. and Curry, A. (2001) Service improvements in public services using SERVQUAL. Managing Service Quality: An International Journal. [Online] Vol.11(6), pp. 389-401. Available: Emerald Insight. [Accessed: 12 March 2018].

Chen, S.H., Yang, C.C., Shiao, J.Y. and Wang, H.H. (2006) The development of an employee satisfaction model for higher education. The TQM Magazine. [Online] Vol.18(5), pp.484-500. Available: Emerald Insight. [Accessed: 8 February 2018].

Chowdhary, N. and Prakash, M. (2007) Prioritising service quality dimensions. Managing Service Quality: An International Journal. [Online] Vol.17(5), pp.493-509. Available: Emerald Insight. [Accessed: 16 July 2018].

Donnelly, M., Kerr, N.J., Rimmer, R. and Shiu, E.M. (2006) Assessing the quality of police services using SERVQUAL. Policing: An International Journal of Police Strategies & Management. [Online] Vol.29(1), pp.92-105. Available: Emerald Insight. [Accessed: 1 March 2018].

Dotchin, J.A. and Oakland, J.S. (1994) Total Quality Management in Services: Part 2: Service Quality. International Journal of Quality and Reliability Management. [Online] Vol.11(3), pp.27-42. Available: Emerald Insight. [Accessed: 18 June 2018].

Eskildsen, J.K. and Dahlgaard, J.J. (2000) A casual model for employee satisfaction. Total Quality Management. [Online] Vol.11(8), pp.1081-1094. Available: Tandfonline. [Accessed: 15 February 2018].

Gremler, D.D., Bitner, M.J. and Evans, K.R. (1994) The Internal Service Encounter. International Journal of Service Industry Management. [Online] Vol.5(2), pp.34-56. Available: Emerald Insight. [Accessed: 22 February 2018].

Gronroos, C. (2000) Service Management and Marketing – A customer relationship management approach. 2nd ed. Chichester: John Wiley & Sons Ltd.

Heskett, J.L., Sasser, W. E. and Schlesinger, L.A. (1997) The Service Profit Chain. 1st ed. New York: The Free Press.

Jayasundara, C.C., Ngulube, P. and Minishi-Majana, M. K. (2010) Using focus groups to investigate service quality determinants for customer satisfaction in selected university libraries in Sri Lanka. South African Journal of Libraries and Information Science. [Online] Vol.76(2), pp. 118-128 Available: Research Gate. [Accessed: 12 June 2018].

Kang, G., Jame, J. and Alexandris, K. (2002) Measurement of internal service quality: application of the SERVQUAL battery to internal service quality. Managing Service Quality: An International Journal. [Online] Vol.12(5), pp.278-291. Available: Emerald Insight. [Accessed: 22 February 2018].

Krueger, R. A. (1998) Developing Questions for Focus Groups (Focus group kit 3). 1st ed. Thousand Oaks: SAGE Publications.

Marshall, G.G., Baker, J. and Finn, D.W. (1998) Exploring internal customer service quality. Journal of Business & Industrial Marketing. [Online] Vol. 13(4/5), pp.381-392. Available: Emerald Insight. [Accessed: 18 June 2018].

Mohammadi-Sardo, M. R., & Salehi, S. (2019). Emergency Department Patient Satisfaction Assessment using Modified Servqual Model; a Cross-sectional Study. Advanced Journal of Emergency Medicine, 3(1), e3-e3.

Parasuraman, A., Berry, L.L. and Zeithaml, V.A. (1991) Refinement and Reassessment of the SERVQUAL Scale. Journal of Retailing. [Online] Vol.67(4), pp.420-450. Available: ProQuest. [Accessed: 30 August 2018].

Ramseook-Munhurrun, P., Naidoo, P. and Lukea-Bhiwajee, S.L. (2010) Measuring Service Quality: Perceptions of Employees. Global Journal of Business Research. [Online] Vol.4(1), pp.47-58. Available: ScienceDirect. [Accessed: 30 January 2018].

Reynoso, J. and Moores, B. (1995) Towards the measurement of internal service quality. International Journal of Service Industry Management. [Online] Vol.6(3), pp.64-83.

Saunders, M., Lewis, P. and Thornhill, A. (2012) Research Methods for business students. 6th ed. Harlow: Pearson Education Ltd.

Scottish Fire and Rescue Service (2018) Fire Safety and Organisational Statistics (Scotland) 2017-18. [Online] Available: https://www.firescotland.gov.uk/media/1316680/sfrs_fso_stats_2017_18.pdf [Accessed: 26 October 2018].

Scottish Government (2018) Police Officer Quarterly Strength Statistics Scotland 30 June 2018. [Online] Available: <https://www.gov.scot/Topics/Statistics/Browse/Crime-Justice/PublicationPoliceStrength/POQS2018Q2/Publication?refresh=0.6111570233426611> [Accessed: 26 October 2018].

Statista (2017a) Number of individuals employed in protective service occupations UK, by occupation. [Online] Available: <https://www.statista.com/statistics/778472/individuals-employed-in-protective-service-occupations-uk/> [Accessed: 9 March 2018].

Statista (2017b) Number of employed health associate professionals UK 2017, by occupation. [Online] Available: <https://www.statista.com/statistics/778449/health-associate-professionals-employed-uk/> [Accessed: 9 March 2018].

Taylor, J. and Westover, J.H. (2011) Job satisfaction in the public service: The effects of public service motivation, workplace attributes and work relations. Public Management Review. [Online] Vol.13(5), pp.731-751. Available: Taylor & Francis. [Accessed: 20 March 2018].

Wikipedia. (2018) Police Scotland. [Online] Available: https://en.wikipedia.org/wiki/Police_Scotland [Accessed: 20 October 2018].

Wisniewski, M. (2001) Using SERVQUAL to assess customer satisfaction with public sector services. Managing Service Quality: An International Journal. [Online] Vol.11(6), pp.380-388. Available: Emerald Insight. [Accessed: 8 February 2018].

Wisniewski, M. and Donnelly, M. (1996) Measuring service quality in the public sector: The potential for SERVQUAL. Total Quality Management. [Online] Vol.7(4), pp.357-366. Available: Taylor & Francis Online. [Accessed: 14 June 2018].

Zeithaml, V.A., Parasuraman, A. and Berry, L.L. (1990) Delivering Quality Service: Balancing Customer Perceptions and Expectations. 1st ed. New York: Macmillan Inc.