Performance measuring in nursing homes

Does working with performance measurements improve well-being?

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Sammanfattning

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Fem nyckelord: Prestationsmätning, icke-finansiella prestationsmått, prestationsutvärdering, prestationer på äldreboenden, ledning av Svenska äldreboenden.

Syfte: Syfte med denna studie var att undersöka ifall arbete med prestationsmått förbättrar den upplevda välmåendet hos brukare på äldreboenden i Sverige.

Metod: En genomsökning av tillgänglig litteratur genomfördes för att skapa större förståelse för tidigare forskning. Därpå samlades sekundärdata in angående måendet hos brukare på äldreboende. Efter detta designades en enkät som skickades ut till samtliga kommuner i Sverige för att samla in data ämnad till att jämföras med det första datasetet. Detta gjordes för att studera möjliga relationer mellan dem.

Teoretiska perspektiv: Det teoretiska perspektivet i denna uppsats baserar sig på tidigare forskning och litteratur på området prestationsmätning, och med särskilt fokus på icke-finansiella prestationsmått i synnerhet.

Empiri: Uppsatsen har undersökt vilka prestationsmått, vilka förändringar samt vilka typer av utvärderingar som nyttjas av svenska kommuner i styrandet av äldreboenden. En enkät skickades ut till samtliga kommuner i Sverige för att samla in ett så stort dataset som möjligt. Resultaten från enkäten jämfördes sedan med ett dataset erhållet från Socialstyrelsen gällande välmåendet och trivseln hos brukare boende på äldreboenden.

Resultat: Uppsatsen visar att prestationsmätning som det nyttjas på svenska äldreboenden som helhet inte är korrelerad med brukarnas välmående. Det finns dock specifika områden av prestationsmätning som är starkt korrelerad som exempelvis förändringar som genomförs som resultat av de mätningar som genomförs.

Abstract

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Key words: Performance measurement, non-financial performance measures, performance evaluation, performance within nursing homes, governing Swedish nursing homes.

Purpose: The purpose of this study was to explore if working with performance measurement improves the experienced quality of well-being as reported by the residents of nursing homes in Sweden.

Methodology: A literature search was conducted in order to gain insight into the previous research. Afterwards, data about the nursing home residents' well-being was collected. A questionnaire was then designed and sent out to different municipalities in Sweden to gather data for comparison, and the two datasets were used to study any possible relations between them.

Theoretical perspectives: The theoretical perspective of this thesis is based on previous research and literature regarding performance measurement, and non-financial performance measures in particular.

Empirical foundation: The study has researched which performance measures, which changes and what kind of evaluation were utilised by Swedish municipalities when governing the nursing homes. A survey was sent out to all municipalities in Sweden to gather as large a dataset as possible. This data was then compared with a dataset provided by the Swedish National Board of Health and Welfare regarding the self-assessed well-being of residents residing in nursing homes.

Conclusions: The findings of this study reveal that performance measuring in Swedish nursing homes as a whole is not correlated to that of the residents' well-being; there are though certain areas which are heavily correlated such as the changes done as a result of the performance measurement.

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1.0 Introduction

1.1 Background

Whether managing a business to try to make a profit or running an organisation with a non-monetary purpose, it is important to be able to assess what is being done, as otherwise it would be difficult to know if right things are being done. One way to do this is through the use of performance measures. By establishing what is important to measure in an organisation, these measures can be used to evaluate how well an organisation is performing. On a surface level this seems like a simple concept, but where it usually becomes complicated is in the implementation of performance measurement on a specific organisation, since to some degree, every organisation is unique (Marr, 2009).

When it comes to performance measurement in the public sector, one has to consider that the goals usually are aimed at delivering service and quality rather than making a profit. It is also worth considering that most organisations in the public sector are interrelated and, to some degree, dependent on one another. Add to this the expectations of the residents of these services, and it becomes evident that public sector organisations face different challenges than private companies (Balaboniene & Vecerskiene, 2015). One particular branch of the public sector that will be the focus of this thesis is the care for the elderly provided by the municipalities of Sweden, and this paper will focus on how the public sector operates and utilises performance measures in the area of nursing homes but not the private companies which also operate in this area.

A well-functioning and efficient care for the elderly is a politically important subject in Sweden. It is also one of the most costly expenditure areas for the municipalities of Sweden, costing approximately 129 billion SEK, or in other words 18.4% of the entire costs of the municipalities, second only to the primary school system (Holström, 2020). Based on these facts, it becomes evident that this subject needs to be studied and revised on a regular basis. It is in everyone's best interest that the resources allocated to the care for the elderly is utilised in an as efficient way as possible and that the organisations strive to provide the best care possible.

In the early 1990s, Sweden reformed how the state managed the public funds and how the municipalities were organised. This was done through the, at the time, new Kommunallag. This gave municipalities greater freedom in how they developed and organised their businesses (Brorström, 1997).

Nursing homes in Sweden are geared towards care for individuals who are over the age of 65 and who cannot care for themselves, even with the assistance of home care services. Angelis & Jordahl (2014) state that most people who move to a nursing home usually have only a few

years left to live and thus it is uncommon that a resident moves from one nursing home to another. Based on this, it becomes very important for municipalities to evaluate and assess the work being done in these facilities. In order to evaluate the quality of the work being done, the municipalities and the state need to utilise objective performance measures. A complication that has to be considered in relation to these measurements is that many of the patients residing in these facilities might have difficulties answering surveys on their own, which are aimed at measuring their own perceived well-being and satisfaction with the care that they receive. This issue is rather interesting to keep in mind when one considers that the Swedish National Board of Health and Welfare every year issues a survey that is meant to measure and evaluate these factors.

There are a lot of conflicting studies on whether performance measurements improve organisational output both in the public and private sector. Whilst there are a lot of inconclusive research (Adair, Simpson, Birdsell, Omelchuk, Casebeer, Gardiner, Newman, Beckie, Clelland, Hayden & Beausejour, 2003; Adair, Simpson, Casebeer, Birdsell, Hayden & Lewis, 2006; Bourne, Kennerley & Franco-Santos, 2004), there is also a lot supporting the concept (Banker, Potter & Srinivasan, 2000; Davis & Albright, 2004; Evans, 2004; Hoque & James, 2000; Ittner & Larcker, 1998; Ittner, Larcker & Randall, 2003), even in the healthcare and public sector (Elg, Broryd & Kollberg, 2013; Ivers, Jamtvedt, Flottorp, Young, Odgaard-Jensen, French, O'Brien, Johansen, Grimshaw & Oxman, 2012; Lim & Tang, 2000; Mannion & Braithwaite, 2012; Speklé & Verbeeten, 2014). There seems to be little to no evidence that measuring performance leads to worse outputs for an organisation (Franco & Bourne, 2004; Neely, 2008; Perera, Harrison & Poole, 1997).

Previous studies have often focused on evaluating care for the elderly via interviews in order to extract qualitative information which might grant greater insight into specific parts of the elderly care (Angelis & Jordahl, 2014). The purpose of this paper is to evaluate the link between self-assessed residents' well-being and managerial performance measures to see how the municipalities' work with performance measurement impacts outcome by cross-referencing two different datasets, from the managers and from the residents.

1.2 Problem discussion

Performance management might seem simple at the surface level: determine what matters to the organisation and try to make it as clear as possible. The relevant information is then collected which will allow understanding of whether the performance delivered is in line with the organisation's strategy. It is important to understand the data gathered so that the delivery of the performance can further improve (Marr, 2009). Performance measuring is utilised in helping to improve the performance of an organisation by studying the underlying drivers and factors that affect the output and results of the organisation. If done correctly, it can be a great tool for directing focus onto what makes an organisation successful in its endeavours (Marr, 2009).

Since the level of comfort and satisfaction of the residents of the nursing homes in each municipality in Sweden is measured every year by the National Board of Health and Welfare (2020b), this grants an important insight into the kind of quality that is delivered by the municipalities. Based on the fact that the primary means of measuring how well these facilities are performing their tasks is by measuring the satisfaction of the residents, it also follows that it is just as important to study how the municipalities measure and evaluate their own work and if this has any impact on the satisfaction of the residents.

This paper hopes to add to the literature in performance measuring as this is a largely unexplored field with regard to how it impacts municipalities' organisations, especially in the area of nursing homes. There are a lot of research about the impact of performance measuring as a managerial tool and its positive outcomes on organisational performance (Banker, Potter & Srinivasan, 2000; Davis & Albright, 2004; Elg, Broryd & Kollberg, 2013; Hoque & James, 2000; Ittner, Larcker & Randall, 2003; Ivers et al., 2012; Lim & Tang, 2000; Mannion & Braithwaite, 2012; Speklé & Verbeeten, 2014) and customer satisfaction (Evans, 2004; Ittner & Larcker, 1998), but there are, as far as the authors are aware of, little within the realm of the nursing homes. Through the findings of this study, we hope to examine whether performance measuring improves organisational outcomes, in this case represented by the residents' well-being, and if it does, which factors are the most relevant for improvement. As this is a largely unexplored area, it is difficult to compare our findings to that of earlier research, but the authors still hope that the information will be a valuable addition to the literature within the performance measurement in the public sector. We have chosen to examine performance measuring from three different perspectives: *Residents*, *Personnel* and *Economic management*.

There is no uniform way to govern nursing homes in Sweden but rather just the goal that the residents of these homes shall receive adequate care. This means that each municipality governs in a way different from the other and what impact performance measurements have as a managerial tool varies. This study hopes to shed some light on if performance measuring can be used to improve the residents' well-being and see if the mostly positive research about the performance measurement as a tool to improve organisational performance also is true in the area of nursing homes and if so, which factors are most highly correlated to the residents' well-being (Banker, Potter & Srinivasan, 2000; Davis & Albright, 2004; Elg, Broryd & Kollberg, 2013; Evans, 2004; Hoque & James, 2000; Ittner & Larcker, 1998; Ittner, Larcker & Randall, 2003; Ivers et al., 2012; Lim & Tang, 2000; Mannion & Braithwaite, 2012; Speklé & Verbeeten, 2014).

1.3 Research question

- *Does measuring performance lead to better self-assessed well-being for the residents of nursing homes?*

2.0 Theory and previous research

2.1 Performance indicators/measures

The Swedish National Board of Health and Welfare (2020a) defines *good care* as: knowledge-based, safe, individualised, effective, equal and accessible. This definition is used as a guideline as well as a goal within the social care sector, including the elderly care, and in order to reach this goal, performance is measured and different indicators are used for management in the healthcare sector (Anell, 2010).

The primary type of indicators used in the healthcare sector is process indicators which measure the relationship between the implemented processes and the outcomes, and these process indicators are generally easier to analyse and inspect compared to the other indicators as the healthcare providers usually follow predetermined processes, making it easy to document and link the processes and the outcomes (Anell, 2014). However, this also means that the measurements can be manipulated; for example, a healthcare provider can fabricate the records or skip certain processes to perform only the essential processes (Anell, 2014). Therefore, it is important to carry out quality assurance activities, such as medical audit (Anell, 2014). Another aspect to keep in mind is that the indicators must be reviewed and updated regularly in order to ensure that the indicators measure correct variables that are relevant (Anell, 2014; Ittner & Larcker, 2003; Marr, 2009).

Performance measuring has evolved in the Swedish healthcare sector since the 1990s, leading to the National Board of Health and Welfare's annual transparent regional comparisons by which comparisons are made between all the 21 county councils with regard to quality and efficiency since 2006 (Anell, Glenngård & Merkur, 2012). This development was partially led by the privatisation in Sweden as patients found a need for information on different healthcare providers. In 2010, it was found that this initiation had led to positive outcomes as improvements were observed for most indicators, and today, developing effective and reliable performance indicators is considered to be necessary (Anell, Glenngård & Merkur, 2012).

This focus on the indicators is not unreasonable; an indicator is a measurable element in performance which can be used to evaluate the quality of care (Lawrence & Olesen, 1997). In order to assess the quality of care, indicators need to be able to measure performance reliably, and transparent indicator assessment and feedback methods as well as measurement-based improvement plans are necessary (Grol, 2013). As previously described, there is little to no research about the performance measurement within the nursing homes, thus very few indicators have been proven to be useful or relevant. There are guides available to nursing home managements about how to govern the homes with an overview of performance measurement and recommendations (Angelis & Jordahl, 2014; Swedish Association of Local Authorities and Regions, 2019), but before this paper, there were no collected works about

what indicators Swedish municipalities and districts were using when working with performance measurement nor how correlated these were to the residents' well-being.

2.2 Performance measurement and outcome

As stated above, it is important to develop and use reliable indicators for performance measurement within the healthcare sector in order to ensure that the quality of care provided to the patients meets the conditions dictated by the definition of *good care* from the Swedish National Board of Health and Welfare (2020a). But does the performance measurement lead to better performance, i.e. better outcomes? In order to answer this question, it is essential to determine what performance is, and this would depend on the organisation. For example, for profit-making organisations, maximising the profit could be the performance, and for student unions, maximising the benefits of the students could be the performance. Performance measurement is in the context of this paper defined as "evaluating how well organisations are managed and the value they deliver for customers and other stakeholders" (Moullin, 2002, p. 188), thus, for municipalities managing nursing homes, how good the nursing homes are managed and the value they deliver for the residents, i.e. how satisfied the residents are with their residence, is to be understood to be the performance.

There have been many studies that have tried to examine the performance measurement and its effects. For instance, there is a theoretical model that attempts to illustrate the effects of performance measurement, and according to this model, performance measurement leads to performance improvement as abstract ideas become concrete actions in the process of measuring the performance (Pavlov & Bourne, 2010). The performance measurement thus has the effect of prompting, leading and reinforcing the performance improvement processes which in turn lead to better outcomes, rather than being an activity that automatically improves the performance.

Many studies have found that using different performance measures, non-financial measures in particular, has a positive effect on performance in the private sector (Banker, Potter & Srinivasan, 2000; Davis & Albright, 2004; Hoque & James, 2000; Ittner, Larcker & Randall, 2003). Regardless of whether the comparisons were made between different companies or different divisions within a same company, it was found that the use of non-financial measures is positively associated with financial performance (Banker, Potter & Srinivasan, 2000; Davis & Albright, 2004; Hoque & James, 2000; Ittner, Larcker & Randall, 2003). It was further found that measuring customer satisfaction might be economically relevant. There was also qualified support for including customer satisfaction measures in internal performance measurement systems (Ittner & Larcker, 1998). Organisations using mature performance measurement systems were found to achieve better outcomes with regard to customer, financial and market performance as well (Evans, 2004).

Even in the healthcare and public sectors, similar findings exist. Performance measurement was found to be a resourceful tool in healthcare organisations as it helps to find areas of improvement (Elg, Broryd & Kollberg, 2013; Lim & Tang, 2000; Mannion & Braithwaite,

2012), and some have found that analytic usage of performance measurement enhances performance (Speklé & Verbeeten, 2014), which is correlated with the theoretical model presented above (Pavlov & Bourne, 2010). As the analytic usage of performance measurement means that the public sector managers are able to present and evaluate the policies and assumptions behind them in order to revise policies if necessary (Speklé & Verbeeten, 2014), it is effectively going through the process of turning abstract ideas into concrete actions as proposed by the model (Pavlov & Bourne, 2010). This is supported by other studies which found that audit and feedback could be effective tools to improve professional practice (Ivers et al., 2012), as the process of auditing and feeding back require analysis and evaluation of the current status.

There are, however, other findings which contradict the aforementioned studies and their results of the performance measurement being a positive driver of the organisational outcome. For instance, careful analysis of many previous studies, which had found that the performance measurement was positively associated with organisational outcome, showed that this association was in fact weak (Franco & Bourne, 2004), and others have found no relationship between the performance measurement and performance (Perera, Harrison & Poole, 1997). Some other studies have even found a negative relationship between performance measurement and performance (Neely, 2008). Many other studies have found that the effects of the performance measurement were very unclear and that there was a great need for further research in this field (Adair et al., 2003; Adair et al., 2006; Bourne, Kennerley & Franco-Santos, 2004).

One of the more common mistakes when establishing performance measures for a given organisation is not validating the links between the chosen measures and an increase in organisational performance (Ittner & Larcker, 2003). This problem often occurs because organisations make assumptions instead of verifying that their chosen measures are relevant. The results of given measures are seen as self-evident instead of being scrutinised for a causal relationship between the measures and the outcomes. Another connected problem is that organisations end up measuring more and more factors. This results in a kind of performance bloat where it becomes more and more difficult to make decisions and adjustments based on the measures that actually provide useful information and assist in a given decision-making situation. There is also an inherent risk that undue focus is placed on measures which are linked to different types of bonuses, especially if good results can be easily accomplished (Ittner & Larcker, 2003).

Another risk when choosing a strategy for measuring performance is measuring incorrectly (Ittner & Larcker, 2003). It is easy for an organisation to measure in a way in which no statistical validity can be established, meaning that what is measured does not capture what it is supposed to. It might also be problematic determining reliability for the data measured which refers to the degree to which measurement techniques show any real changes in performance. There is also the risk of using simplified measuring scales. Whilst it might seem to be a good idea to, for instance, only allow answers corresponding to a scale between 1 and 5, such simplification runs the risk of not capturing the full span and width of what is

measured. Compound this with the problem that some organisations run into when they gather data before they have properly determined what they want or need to identify, and the information they find from their studies might end up with no merit whatsoever (Ittner & Larcker, 2003).

An organisation has to turn the data at their disposal into information that can be utilised, by which Ittner & Larcker (2003) mean that organisations should utilise tools such as multiple regressions and correlation analyses in order to identify and test which measurements are relevant. It is also possible to use other methods in order to evaluate the material like focus groups and one-on-one interviews. The organisational actions need to be based on findings, which might seem self-evident but are still important to observe. If organisations disregard the facts that are presented when evaluating the results of the performed tests, they will have a hard time determining what is actually important and what needs to be focused on. There is then an increased risk that the organisation might also continue measuring unimportant indicators that would not help to improve the output (Ittner & Larcker, 2003).

3.0 Methodology

3.1 Research strategy

The purpose of this paper was to examine if there was any correlation or causal relationship between the performance measurement within the nursing homes and the experienced self-assessed well-being amongst the residents.

For the purpose of this study, we believed that the most efficient way to gain insights was through the lens of quantitative work based on data analysis, given the time and financial limitation. The use of quantitative research methodology would help us determine what the driving factors were in an analysis that contains a large number of variables. Thus relationships between variables could be mapped and presented in a coherent way through the data rather than being based on conjectures and assumptions. Based on this, the tools of statistics and maths, such as linear regression, are an integral part of this thesis.

As the angle of incidence was unexplored in previous research, we believed that an analysis of the data would be more objective than working qualitatively based on the work of Blomqvist, Hallin & Lindell (2018) and Bryman & Bell (2011). The statements by these authors are further strengthened by the replicability of our study. The outputs of the maths and statistical modelling would be the same regardless of who conducts the analysis given access to our dataset.

3.2 Data collection

One of the two primary datasets used in this study is based on a nationwide survey issued by the Swedish National Board of Health and Welfare (2020b) which examines the self-assessed well-being by the residents of the nursing homes. The dataset contains answers from all 290 Swedish municipalities and several districts within the larger cities such as Stockholm or Gothenburg over a three-year period. As the survey is conducted yearly and the data within is a summary from the past three years, the document grants greater accuracy and less chance for anomalies to disrupt the findings. The study is also answered by the residents and not by personnel, relatives or others unless assistance is needed, which makes the reliability of the results higher (Bryman & Bell, 2011).

The survey by the Swedish National Board of Health and Welfare (2020b) is made up of 37 questions which covers several topics such as personal well-being, happiness with the personnel, the housing and other residents. The primary issue with quantifying the results from the survey and turning them into usable data is that the answers are not numerical but rather divided into different alternatives from *strongly agree* to *strongly disagree*. Modifications were made so that the individuals who had answered *strongly agree* on a question with a positive connotation were assigned a score of 5 and *strongly disagree* were

assigned a score of 1.The sum of the answers was then added together and then divided by 5 to give the municipality a score on that particular question. This was done for every question, and the sum was added together for a total which we referred to as a *municipality score*. The reason for why this was done was because analysing each of 37 questions in the questionnaire from the Swedish National Board of Health and Welfare (2020b) against all of the questions in our own questionnaire would have ended up being a dataset too large to analyse with the given time and resources.

To achieve a meaningful analysis of how the results of the Swedish National Board of Health and Welfare (2020b) related to performance measuring and organisational performance, we decided to collect our own data to analyse in relation to that of the municipality score.

To collect primary data to cross-reference and analyse with the other dataset a questionnaire was designed and sent out to the municipalities in Sweden. The premise of the study builds on the comparison between the performance measurement used and the results from the perspective of the residents. The choice of questionnaire over interviews was made to enable a greater number of comparisons in more municipalities. With a questionnaire we could also ensure that everyone received the same question in the same format as interviews, both structured and semi-structured, by their nature possess a larger variation between instances (Bryman & Bell, 2011). Using a questionnaire, the questions and how the questions are framed are already predetermined. The data collection was also limited to questionnaires as a result of limited time and resources and the ongoing Covid-19 pandemic.

The questionnaire which can be found in Appendix 1 contained mainly questions with numerical linear answers in order to facilitate greater data analysis. We offered the respondents the option to fill in other answers, if relevant to the question, for greater accuracy in answers. To as large of a degree as possible the questions consisted of close-ended answers with a numerical indicator for measuring to scale and thus making it easier to analyse such responses within the used statistics. Given that there were municipalities with fewer than 30 responses in the survey conducted by the Swedish National Board of Health and Welfare (2020b), the decision was made to exclude these municipalities in our own data collection and thus we did not send out the questionnaire to these municipalities.

This questionnaire was sent out to either the head of social services (socialchef) or head of administration (förvaltningschef) in each municipality depending on the municipality structure. The contact form was via email and the email addresses were collected by visiting each of the municipalities' websites to minimise the risk of gathering outdated contact information for responsible managers. In the cases where we could not acquire email addresses through the municipalities' websites, we enquired the respective municipalities' contact centres about them. In the end, we were able to collect email addresses to 314 municipalities and districts before sending out the questionnaire. In the cases where the sent questionnaire was returned due to invalid email addresses, we once again reached out to the respective municipalities' contact centres for updated contact details to resend the questionnaire.

Before sending out the questionnaire, we created a follow-up system to ensure that we would receive as many responses as possible. We left our contact information in the emails to make sure that it was easily accessible. Three working days after the initial email, we sent another email as a reminder requesting them to complete the questionnaire and contact us if they had any questions. After another three working days, an additional follow-up email was sent to encourage them to either answer or forward the questionnaire to someone whom they believed could answer. In the case of holidays or sick leaves, we contacted the respective municipalities' contact centres to be directed to the proper person who could answer, and this was done via email. Each time we emailed a municipality contact centre, they replied back and informed us that they had forwarded it to someone whom they believed was the right person to answer the questionnaire.

3.3 Questionnaire design

For the purpose of choosing the topics and questions to use within our questionnaire, we relied primarily on four sources for clarification and guidance: Swedish National Board of Health and Welfare (2020b), Österlind (2013), Anell (2010) and Swedish Association of Local Authorities and Regions (2019, 2020). After researching, we concluded that dividing the questionnaire into four separate sections would not only make it clearer for the respondents in what category they are supposed to give their answers but also make it easier for data analysis once collected. The four categories were: brukare (residents), personal (personnel), ekonomi (economic management) and övergripande uppfattning (overall perception).

As the study was about the well-being of the nursing home residents, we believed that it was necessary to have a dedicated category about the residents. In this section, we posed questions about the well-being of the residents (filled in by the managers). This enabled us to compare the data with the survey *What do the elderly think about elderly care, 2020? (Vad tycker de äldre om äldreomsorgen, 2020?)* from the Swedish National Board of Health and Welfare (2020b) which contained answers from the perspective of the residents. Having the category of residents would allow us to test if the seemingly obvious and direct link of resident as a performance measure area and resident well-being are interconnected or if these obvious connection can be non conclusive and not correlated (Ittner & Larcker, 2003)

As the residents of the nursing homes are to a large degree reliant on the personnel for their well-being as demonstrated by the results of the survey conducted by the Swedish National Board of Health and Welfare (2020b), it was vital to have a section regarding the personnel. A large part of the total municipality score was made up of questions about the residents' experience with the personnel thus seeing if these factors were correlated and if so, to what degree.

Even though the primary purpose of the elderly care is to deliver good service to the residents of nursing homes, they are still constrained by an operational budget which dictates how much resources can be allocated to the different facilities, and therefore we considered it to be necessary to include a category of questions in our survey about performance measures related to economic factors. These questions were derived from suggested values and measures presented by the Swedish Association of Local Authorities and Regions (2019, 2020).

A lot of the questions within each of these three sections are exactly the same, e.g. "the changes as a result of performance measurement", "how often measures are done" and "on what level results are evaluated and examined". The reason for this was to grant a greater statistical accuracy on what factors are actually correlated. By having the same questions throughout the questionnaire in each separate area, we could see if an individual data point always was of significant importance or if it varied depending on the tested area.

The *overall perception* section was about how the municipalities considered each previous section to be of importance and how they thought they performed in each category compared to other municipalities. This paper wanted to also gain insights to whether self-perception of the performance was heavily correlated to the municipality score.

A downside of questionnaires compared to interviews is the need for properly formulated questions that are clear in intent from the start as, unlike interviews, further explanation is not as easy to provide (Bryman & Bell, 2011). Whilst the researchers provided their contact details in the form of email address and phone number, it was very unlikely that the respondents would contact the researchers for clarification on a single question (Bryman & Bell, 2011). Once the questionnaire has been sent out, further edits are generally not a possibility as this would create divergences between the already collected answers and post-edit which risks affecting the result and is thus considered bad practice. Editing questions might also change the interpretation of the meaning, which means that it is not the same questionnaire for all respondents which would make the answers hold less validity (Bryman & Bell, 2011).

3.4 Operationalisation

Residents
Questions: Loneliness amongst residents, Happiness with offered activities, General well-being, Well-being with cohabitants, Well-being with the personnel

Personnel
Questions: Personnel who believe they are performing their task on a high level, Personnel who feel supported by their supervisor and colleagues, Personnel who feel their work prioritisation is clear, Personnel who believe their branch performance is on a high standard, Personnel who believe that documentation is on a good level

Economic Management
Questions: Cost per resident, Net cost variance, Total cost including housing per resident per year, Personnel cost per resident per year, Waiting time until residents' move-in date, Net cost development, Cost development over time

Performance Measurement
Operational definition: One of the independent variables that measures which performance measures are being utilised by the municipalities to manage the nursing homes

Theoretical definition: "Evaluating how well organisations are managed and the value they deliver for customers and other stakeholders" (Moullin, 2002, p. 188)

Changes as a result of performance measurement results
Operational definition: One of the independent variables that measures which kind of changes that the municipalities take as a result of the information provided by performance measures

Theoretical definition: Changes are defined as altering, modifying or making it different from its current state (Ittner & Larcker, 2003).

Questions: Changes in budget, Changes in personnel allocation, Changing in housing allocation, Changes in policy and rules, Changes in staff education, Changes in performance measurement systems, Changes in work routines, Changes in work environment

Evaluation of performance measurements
Operational definition: One of the independent variables that indicate how often the municipalities evaluate their use of performance measures

Theoretical definition: Evaluation is defined as a part of the process of using and improving performance measures (Ittner & Larcker, 2003)

Questions: How often do you evaluate the results of your performance measures, to what extent are planning and evaluation done on unit level, administrative level and municipal level as the result of the performance measured

Municipality Score
Operational definition: Dependent variable that measures the collected self-assessed well-being of the residents of nursing homes in Sweden.

Theoretical definition: Residents' well-being described with numerical values

3.5 Pre-testing

The pre-testing phase of the questionnaire (see Appendix 1), used in this paper as the primary form of data collection, had a pre-testing phase of 12 individuals to make sure that the questionnaire was understandable and followed a logical progression. In an attempt to make it as accurate as possible, the pre-testing phase involved individuals who held similar positions or worked in the field as the intended recipients.

As a result of the pre-testing, several changes were made to the questionnaire, the primary one being the structure of the questionnaire. Originally, each of the three main areas had separate potential changes tied to the outcome of performance measurement results, but after pre-testing and evaluation, we deemed that it would be too difficult to actually compare the different areas and the results within these if questions were stated and interpreted differently. Thus, as a result of the pre-testing, we reorganised the questionnaire to contain the same type of changes within each area to more accurately evaluate which area and which result was correlated to the residents' well-being.

Pre-testing is the process of testing the questionnaire on relevant external observers to validate that the questionnaire is in fact understandable (Bryman & Bell, 2011; Fowler, 2002). Pre-testing allows observers to correct and improve any potential issues that could lead to misunderstanding amongst recipients. Outside of the relevant external observers, it is also useful to present a questionnaire to established academics within the process of the pre-test phase to validate that the questions are interpreted as intended (Ghauri & Gronhaug, 2005).

3.6 Descriptive statistics

Descriptive statistics is a form of statistics which describes or summarises any collection of data points through quantitative means (Prem, 1995). The summarisation and presentation of the data is usually conducted via the use of histograms, graphs, charts, diagrams and other visual representations of the data. Other than illustrations as previously mentioned, Prem (1995) describes the use of showing the data through basic statistics such data distribution, mean and median. According to Saunders, Lewis and Thornhill (2016), it also serves as a way to identify anomalies and outliers within the data. The independent variable throughout the testing phase of this study is that of the aforementioned municipality score which is a total score of the residents' well-being (Boyce & DiPrima, 2012). The independent variables within the testing phase of this study are the questionnaire answers collected. It is the dependent variable which is being tested and the variation of its score in relation to the independent variable.

Variable measurement can be divided into four areas, nominal, ordinal and interval/ratio (Stevens, 1946). Nominal means simply a named variable, ordinal variables are those which are named + ordered variable, interval are the same as ordered within an interval and ratio is an interval but can accommodate absolute zero (Stevens, 1946). Our own questionnaire was

that of an interval between 0–7 with some ordinal values in the open-ended questions where respondents were allowed to answer freely and rank how important the factors were.

As an illustrator of relationships between variables is that of the correlation matrix (Bock, n.d). The correlation matrix is a great tool to visualise the relationship between variables, but the reason it was not used in this paper was that the number of variables were so great and the constraints on the software meant we would have had to divide it into subsections which might risk leading to non-representative results. Given the nature of simply collecting data in the questionnaire to compare to one variable (i.e. municipality score), the use of correlation matrix was also less relevant.

3.6.1 Regression analysis

Regression analysis is a widely used tool when analysing dependent variables and understanding how one data point interacts with another, and it is a statistical model for examining correlation (Montgomery, Peck & Vining, 2012). Regression analysis shows the relationship between different independent variables and the dependant variable (Prem, 1995). When using the regression analysis, there are a few assumptions often relied on, which are: (1) the sample is representative of the population and not a deviation, (2) there are no errors in the measuring of the independent variable, (3) deviations in the model have a expected value of zero, (4) homoscedasticity and (5) the residuals are uncorrelated with each other (Fotheringham, Brunsdon & Charlton, 2002).

3.6.2 P-value

The P-value is the chance of getting a result for a test static that is as extreme as or even more extreme than the outcome observed, assuming that the null hypothesis is true (Johnson, 2015). P-value is a way to disprove the null hypothesis, as an extremely low value would not be likely if the null hypothesis is true (Devore, 2015). Researchers are free to choose what they deem to be a statistically significant P-value within their study, and for this study, the result < 0.05 was chosen, as this is seen as the standard (Devore, 2015). We have chosen to use an asterisk system as well as write out the complete value for ease of reading. * means a P-value result of < 0.05, ** = a P-value of < 0.01 and *** = a P-value of < 0.001.

3.6.3 T-Statistic and F-statistic

T-statistic is the degree of deviation from a value estimated within the parameter based on the standard deviation (Devore, 2015). T-statistic is a statistical measurement used to help determine if the null hypothesis should be rejected (Devore, 2015). The T-statistic is used within statistical hypothesis testing and creating confidence intervals (Devore, 2015). In this paper, values which are greater than 2 or less than –2 are considered significant.

If the null hypothesis is true, then the value of the F-statistic should be equal to or around a value of 1 (Devore, 2015). Thus, a very large F-statistic value is likely to mean something significant.

3.6.4 Cronbach's Alpha

Cronbach's Alpha is a statistical tool to measure the internal reliability of a statistical test. It is one of the most common tools for measuring internal consistency (Laerd Statistics, n.d). Having a questionnaire that relies on scales like that of Likert, the Cronbach's Alpha is used to see if the scale is valid. Cronbach's Alpha score is generally within the range of 0 to 1, but if input is faulty, it can result in negative numbers. A result above 0.7 is considered good, but the higher the result, the better, until it reaches a threshold of 0.95 which should not be exceeded (Bryman & Bell, 2011). The inverse is true in that if the questionnaire is meant to measure different relationships, the Cronbach's Alpha number should be lower. In the case of this study, a higher score would suggest a higher reliability since they are measuring the same concept.

3.7 Data analysis

After collecting the data through the questionnaire, there was a question about how to best analyse the data in relation to that of the Swedish National Board of Health and Welfare (2020b). We first converted how often they measured the different factors by giving a value of 10 for every 4 years, 20 for every other, 40 for every year, 160 for every quarter and 480 for monthly. There were fundamentally two different approaches we could have taken. Our questionnaire was classified into 88 different questions and sub-questions in total. Initially, we wanted to conduct a thorough analysis by cross-referencing every single variable in our dataset against those of the Swedish National Board of Health and Welfare using linear regression. This, however, would have resulted in a programme that would have had to run 38 questions from the Swedish National Board of Health and Welfare's survey against the 88 questions from our questionnaire, resulting in 3,520 different results. The process was halted, as although this would have been an extremely thorough analysis which could have gained great insights within the area of performance measurement and nursing homes in Sweden and possibly beyond that, there existed neither time nor resources for going through a document which ended up being 293 pages.

The alternative approach which we took was to compile all the answers of the Swedish National Board of Health and Welfare's (2020b) individual questions into numerical values as previously described, and this generated a total score. This municipality score, which was an overall value given by the compilation, would then be run against all the questions in our questionnaire. Thus, the outcome was a running of the municipality score against 88 questions, resulting in a document with 88 different results divided into the four fields, *Residents*, *Personnel*, *Economic management* and *Self-evaluation*, using linear regression. The results presented in the study is that of P-value, STD error, T-statistic, residual standard error and F-statistic.

3.8 Literature search and review

The theoretical foundation and framework within the study have been changed over time and been updated iteratively throughout the process. The literature search was done to gain an understanding on what had previously been researched within the area of performance measurement and the results of these studies as well as to gain an understanding of what this study could add to the literature in terms of filling the existing research gaps or complementing the previous research in expanding dimensions covered. It was also done as a way to not reinvent the wheel but rather build on previous frameworks and results.

We have utilised the following terms in order to find available literature: performance measurement, performance measurement in the public sector, non-tangible performance measurement, managing public sector organisations, customer satisfaction, organisational performance, directing nursing homes, performance management result, performance management correlation, performance management outcome. The searches were conducted in either Google Scholar or LubSearch.

We used a number of books for the use of statistics, data collection and analysis: *Business research methods* (Bryman & Bell, 2011), *Probability and Statistics for Engineering and the Sciences* (Devore, 2015), *Elementary differential equations* (Boyce & DiPrima, 2012), *Introduction to linear regression analysis* (Montgomery, Peck & Vining, 2012) and *Geographically weighted regression: the analysis of spatially varying relationships* (Fotheringham, Brunsdon & Charlton, 2002).

4.0 Empirical findings

4.1 Descriptive statistics

The primary data was collected through an online questionnaire which was sent out via email to all the relevant municipalities and districts. The questionnaire was sent out to a total of 314 people and received 24 responses, achieving a 7.6% response rate. Response rates within 15–20% as it pertains to online questionnaires are generally what is expected, thus we have collected less than what was expected (Jin, 2011). We received a large number of responses which ascertained that, due to the Covid-19 pandemic in combination with the flu season and the upcoming holidays, they would be unable to answer our questionnaire. Some answers indicated that they wanted to answer the questionnaire but deemed that it was too vast for them to allocate time to.

Despite sending the questionnaire to mainly the head of social services or head of administration of each municipality and district, we received a large number of responses from those who held other positions as shown below in Exhibit 1. As written in the *Methodology*, the email encouraged individuals who were unable to answer the questionnaire themselves, due to time or knowledge constraints, to forward the email to a suitable individual within their organisation. The fact that 28% of the respondents held the position of head of unit (enhetschef) indicates that the heads of social services or administration forwarded the email to one of their subordinates, which would also explain why we received two responses from one municipality. 40% of the respondents were the individuals we had emailed, and the other 60% had either forwarded the questionnaire to someone else or filled in another position than the positions which we associated them with.
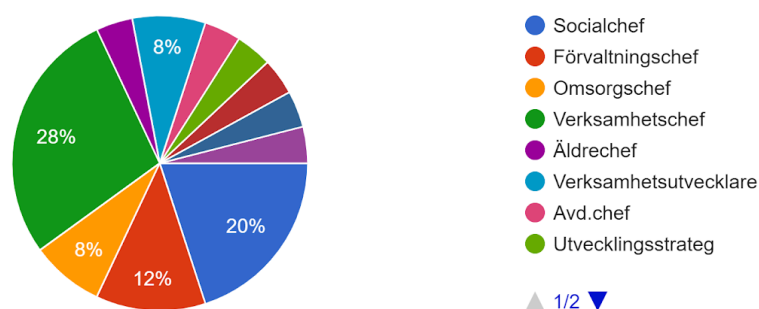
3. Vilken befattning har du?
25 svar

Exhibit 1. Position of respondents

Vilket befattning har du = *Which position do you have?*
Socialchef = *Head of social services*
Förvaltningschef = *Head of administration*
Omsorgschef = *Care manager*
Verksamhetschef = *Head of department*
Äldrechef = *Elderly care manager*
Verksamhetsutvecklare = *Business developer*
Avd.chef = *Head of department*
Utvecklingsstrateg = *Strategy developer*

Another aspect to take into consideration as it pertains to the reliability of the study was to understand how long the respondents had worked in the municipality and how long they had held their current position. The results in Exhibit 2 and Exhibit 3 show that the majority, 76%, had worked in the municipality for over two years and 60% had held their current position for over two years. This was important in understanding the reliability, as it would be easier for an individual in the managing position with a lot of experience in the municipality to understand how the sector was governed, as well as performance measurements and the results of the performance measurements in the organisation.

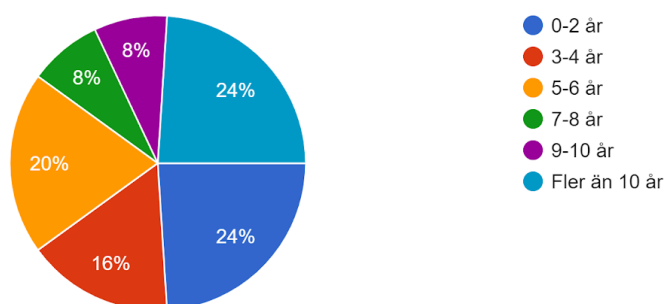4. Hur många har år har du arbetat inom kommunen?
25 svar

Exhibit 2. How many years respondents had worked in the municipality

Translation
Hur många år har du arbetat inom kommunen = *How many years have you worked in the municipality?*
År = *Year(s)*
Fler än 10 år = *More than 10 years*

5. Hur många år har du haft din nuvarande befattning?
25 svar
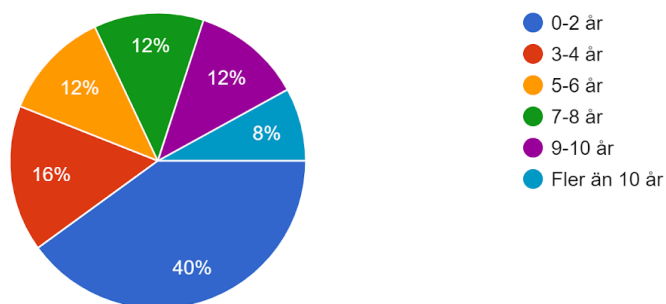
Exhibit 3. How many years respondents had held their current position

<u>Translation</u>
Hur många år har du haft din nuvarande befattning? = *How many years have you had your current position?*
År = *Year(s)*
Fler än 10 år = *More than 10 years*

4.2 Correlation results

The findings below show that there is a substantial difference in results between the three primary categories and one subcategory *Self-evaluation*, not only in the number of statistically significant results but also in how significant these results were. The average P-value of all the variables was 0.35, being far above the value of 0.05 which we deemed to be significant.

Independent variable	Dependent variable	P-value	T-statistic	F-statistic (on 1 and 49 DF)
Residents results				
Loneliness	Municipality Score	0,408	-0,835	0,6965
Happiness with offered activities	Municipality Score	0,8777	0,155	0,02391
General well-being	Municipality Score	0,9727	0,034	0,001179

Well-being with cohabitants	Municipality Score	0,5302	-0,632	0,3998
Well-being with personnel	Municipality Score	0,592	-0,603	0,3639
Personnel results				
Share of personnel who believe they are performing their task on a high level	Municipality Score	0,6574	-0,446	0,1991
Share of personnel who feel supported by their supervisor and colleagues	Municipality Score	0,0302 *	-2,232	4,983
Share of personnel who believes their work prioritisation is clear	Municipality Score	0,09773	-1,688	2,85
Share of personnel who believes their branch performs to a high standard	Municipality Score	0,8912	0,137	0,0189
Share of personnel who believes that documentation is on a good level	Municipality Score	0,08949	-1,732	3,001
Average amount of sick days	Municipality Score	0,9908	-0,012	0,0001353
Economic management results				

Cost per resident	Municipality Score	0,6151	0,506	0,256
Net cost variance	Municipality Score	0,9226	-0,098	0,00953
Total cost including housing per resident per year	Municipality Score	0,1822	1,353	0,1822
Personnel cost per resident per year	Municipality Score	0,09746	1,69	2,8555
Waiting time until residents' move-in date	Municipality Score	0,9254	0,094	0,00886
Personnel cost per resident	Municipality Score	0,09746	1,69	2,855
Net cost development	Municipality Score	0,03482 *	2,171	4,712
Cost development over time	Municipality Score	0,08795	1,741	3,031

Exhibit 4: Performance measures and Municipality Score

Performance measures

When evaluating the category *Performance measures* compared to the municipality score, two factors out of the 19 examined stand out as statistically significant. The first is the results of "those who feel supported by their supervisor and colleagues" in the *personnel* category with a P-value of 0.03. The second factor is the "net cost development" in the *economic management* category with a P-value of 0.03. This means that a rather small selection of the examined factors proved to be significant. The most striking fact about this category is that none of the performance measures related to the residents proved to be statistically significant, which may come as a surprise when considering that the dependent variable was the municipality score i.e. the collected self-assessed well-being of the residents at nursing homes. This is, however, the area which is the most susceptible to being wrong given the authors' background, as the category *Performance measures* could be of great importance but

that the questionnaire did not cover the adequate factors in each of the categories *Residents, Personnel* and *Economic management.*

Independent variable	Dependent variable	P-value	T-statistic	F-statistic (on 1 and 49 DF)
Residents results				
Changes in budget	Municipality Score	0,06836	1,864	3,473
Changes in personnel allocation	Municipality Score	0,6812	0,413	0,1709
Changes in housing allocation	Municipality Score	0,007712 **	2,779	7,222
Changes in policy and rules	Municipality Score	0,167	1,403	1,968
Changes in personnel education	Municipality Score	0,2387	1,193	1,423
Changes in performance measurement system	Municipality Score	0,2375	-1,196	1,43
Changes in work routines	Municipality Score	0,3314	0,981	0,9626
Changes in work environment	Municipality Score	0,6114	-0,507	0,2571
Personnel results				
Changes in budget	Municipality Score	0,004553 **	2,974	8,844
Changes in staffing allocation	Municipality Score	0,105	1,652	2,728

Changes in housing allocation	Municipality Score	0,5758	0,563	0,3172
Changes in policy and rules	Municipality Score	0,6669	-0,433	0,1875
Changes in staff education	Municipality Score	0,08015	1,787	3,193
Changes in performance measurement system	Municipality Score	0,2354	-1,201	1,443
Changes in work routines	Municipality Score	0,376	0,894	0,7983
Changes in work environment	Municipality Score	0,8743	0,159	0,02529
Economic management results				
Changes in budget	Municipality Score	0,4359	-0,786	0,6172
Changes in personnel allocation	Municipality Score	0,5936	-0,537	0,2885
Changes in housing allocation	Municipality Score	0,09285	1,714	2,984
Changes in policy and rules	Municipality Score	0,000606 ***	3,666	13,44
Changes in personnel education	Municipality Score	0,00297 **	3,127	9,777
Changes in performance measurement system	Municipality Score	0,05828	0,0583	3,759

| Changes in work routines | Municipality Score | 0,000405 *** | 3,796 | 14,41 |
| Changes in work environment | Municipality Score | 0.02567 * | 2,301 | 5,296 |

Exhibit 5: Changes and Municipality Score

Changes

The area *Changes* is by far the most significant area not only in the percentage of factors being significant, six out of 24, but also how significant. The area *Evaluation* yielded no results which were significant, and the area *Performance measures* yielded two significant results out of 19. The two results in the area *Performance measures* were that of 0.03 * and 0.03 * compared to the area *Changes*, which yielded two results < 0.01 with "changes in policy and rules" in the category *economic management* with 0.0006 *** and "changes in work routines" in the category *economic management* with 0.0004 ***. These results were the lowest observed in the three primary categories of the analysis (the other being *Evaluation*). "Changes in work environment" yielded a result of 0.02 *, and "changes in personnel education" yielded 0.002 ** in the category *economic management*. There were also two additional results of "changes in housing allocation" with 0.007 ** in the category *Residents* and "changes in budget" with 0.004 ** in the category *Personnel*. This demonstrated that despite having the same option in each of the categories, none of the changes overlapped as significant across the multiple categories *Residents, Personnel* and *Economic management*. Thus, the results indicate that there was no universal variable correlated to the municipality score but rather that each section with the area *Changes* had results which were significant to that category and that category alone. The category *Economic management* yielded four out of the six results and *Residents* and *Personnel* one result each. The two most significant results were also in the category *Economic management*.

Independent variable	Dependent variable	P-value	T-statistic	F-statistic (on 1 and 49 DF)
Residents results				
On branch level	Municipality Score	0,8003	0,254	0,06472

On administration level	Municipality Score	0,1883	1,334	1,78
On municipality level	Municipality Score	0,6101	-0,513	0,2634
How often do you follow up these results	Municipality Score	0,284	0,284	1,173
Personnel results				
On branch level	Municipality Score	0,9123	0,111	0,01224
On administration level	Municipality Score	0,8085	0,244	0,05935
On municipality level	Municipality Score	0,6514	0,455	0,2067
How often do you follow up these results	Municipality Score	0,7971	-0,259	0,06683
Economic management results				
On branch level	Municipality Score	0,7617	-0,305	0,09298
On administration level	Municipality Score	0,2098	1,271	1,615
On municipality level	Municipality Score	0,3292	0,985	0,9711
How often do you follow up these results	Municipality Score	0,4783	0,715	0,5106

Exhibit 6: Evaluation and Municipality Score

Evaluation

None of the levels of evaluation proved to be statistically significant when related to the municipality score. Another interesting piece of data is that, despite changes as a result of performance measuring being heavily correlated to the residents' well-being, none of the categories were even close to being statistically significant as it related to how often they evaluated the performance results. In Exhibit 6, there is a large majority having the same frequency of evaluation with the category *Residents* being evaluated once per year by 76% of respondents, most likely using the Swedish National Board of Health and Welfare's (2020b) yearly survey which this study uses as a foundation. The category *Economic management* was evaluated primarily on a monthly basis as answered by 68% of respondents. Only in the category *Personnel* were the results widely varied, and there was a fairly even distribution over how often the results were evaluated.

Independent variable	Dependent variable	P-value	T-statistic	F-statistic (on 1 and 49 DF)
Importance of Measuring Residents	Municipality Score	0,1116	-1,62	2,624
Importance of Measuring Personnel	Municipality Score	0,05212	-1,991	3,962
Importance of Measuring Economic management	Municipality Score	0,08324	-1,767	3,127
Residents' overall happiness with residence	Municipality Score	0,233	1,208	1,458
Residents' happiness with housing	Municipality Score	0,02463 *	2,319	5,376
Residents' happiness with personnel	Municipality Score	3,84E-06 ***	5,203	27,08
Residents' experienced loneliness	Municipality Score	0,009244 **	2,71	7,345

Budget within branch level	Municipality Score	0,3936	-0,861	0,7409
Work routines	Municipality Score	0,05088	2,002	4,006
Documentation on branch level	Municipality Score	0,004994 **	2,94	8,645
Personnel competence on branch level	Municipality Score	0,1811	1,357	1,357
Manager competence on branch level	Municipality Score	0,06932	1,857	3,449
Quality assurance of performance measurements	Municipality Score	0,8477	0,193	0,03727

Exhibit 7: Perceived Performance and Municipality Score

Perceived performance

The area *Perceived performance* as answered by the fourth part of the questionnaire covered two categories, i.e. how important the managers answering believe that performance measurement is in each of the three categories and evaluation of performance in comparison to other municipalities. The category yielded four results out of 14 which were significant and another three which were almost below a P-value of < 0.05. These categories were approaching a level of significance, indicating that there might be a corollary relationship between these different variables, but it was not something this study was able to determine. In the category *Perceived performance*, there were a lot of results achieving a low P-value, but no other results even neared that of the "residents' happiness with personnel" with a P-value of 3.84E-06 ***, which in decimal form is 0.00000384 or 1 in a 260,000 possibility that the result is due to chance. The result of "residents' happiness with housing" was 0.02 *, "residents' experienced loneliness" 0.009 ** and "documentation on branch level" 0.004 **.

4.3 Cronbach's Alpha result

The internal consistency within the questionnaire's result was 0.922 on all questions that used a scale. There were 85 variables, sum of item variables 373.6 with a variance of 4,209. The result of 0.922 suggests a very strong internal consistency but is still below the threshold of 0.95 which it should not be above (Bryman & Bell, 2011).

5.0 Discussion

Performance measurements

As can be found in the *Correlation Results*, only two out of the 19 examined factors were found to be statistically significant and thus correlated to the municipality score: "those who feel supported by their supervisor and colleagues" (0.03 *) in the category *Personnel* and "net cost development" (0.03 *) in the category *Economic management*. No performance measures related to the residents were found to be statistically significant.

From these findings, a conclusion could be drawn that the support by colleagues and supervisors and the net cost development are the most important factors to be measured and considered for the residents' well-being, rather than the performance measures for the residents' well-being itself. This disregard for the residents' experience and satisfaction can be interpreted to be contradictory to some of the previous studies which supported the inclusion of such measures in the internal performance measurement systems for better performance (Ittner & Larcker, 1998). The fact that the "net cost development", which is a financial measure, was found to be statistically significant can also be considered to be somewhat inconsistent with the previous literature which found that the non-financial measures in particular had a positive effect on performance (Banker, Potter & Srinivasan, 2000; Davis & Albright, 2004; Hoque & James, 2000; Ittner, Larcker & Randall, 2003). It is also interesting that "net cost development" was statistically significant but other questions in the same category *Economic management* which could be perceived to be similar, such as "net cost variance" and "cost per resident", were not found to be statistically significant. On the other hand, the fact that the support by colleagues and supervisors is found to be another relevant factor can be regarded to be consistent with the previous findings as the support might be given in the form of feedback, which would require analysis and evaluation hence concretising abstract assumptions and ideas (Ivers et al., 2012; Pavlov & Bourne, 2010; Speklé & Verbeeten, 2014).

It is, however, important to take into account that there is a possibility that the respondents misinterpreted the questions and gave incorrect or non-representative answers. Also worth noting is that the questionnaire may not have had all the adequate questions needed to examine the complex aspects of the nursing homes and their management. None of the results in the category *Performance measures* were found to be highly significant, having P-values of 0.03.

Changes

The fact that the category *Changes* is by far the category with the most statistically significant results could be surprising but falls in line with the previous literature. If an organisation has a pseudo performance measurement system in place, it would not actually evaluate the performance (Ittner & Larcker, 2003; Marr, 2009). It can also be argued that should changes and improvements not be made with the help of collected information, there is no point in measuring performance. Something that is largely surprising is that despite *Changes* being the category with the largest statistical significance, there was very little correlation to *how often* these measures were evaluated and subsequently changed.

As previously mentioned, a very interesting piece of data found is that each of the categories in the area *Changes*, i.e. *Residents, Personnel* and *Economic management,* had unique changes which were highly correlated to municipality score only in the respective categories. There was no result in the area *Changes* which overlapped with multiple categories as observed, with "changes in housing allocation" being important only in the category *Residents* but not in the others. The same is true for "changes in budget" in the category *Personnel*, and this trend holds true for four results in the area *Changes* as a result of *Economic management* as well. The result of the area *Changes* in the category *Economic management* are more statistically significant than those in the categories *Residents* and *Personnel.* This is not surprising, as one could argue that the category *Economic management* is a driver of everything related to the *Residents* and *Personnel*. The inverse, on the other hand, would not be true. How an organisation manages its finances and utilises its resources are the primary factors in determining, for example, the quality of the facilities, the food being served or how many personnel can be allocated to help the residents. It is thus not surprising that two of the statistically significant results in the area *Changes*, i.e. "changes in policy and rules" and "changes in work routines", are also found in the category *Economic management*, as *Economic management* is a primary driver of changes compared to the categories *Residents* and *Personnel*. It is, however, important to note that these two results were heavily tied to and followed each other in P-value regardless of the area. Whilst not being significant in the categories *Residents* and *Personnel*, they were still in close proximity in terms of value, indicating that they either have a relationship or that the respondents of the questionnaire could not distinguish the meaning between the two categories from each other and answered roughly the same.

The managerial implication of these results is thus that it is vital to change the organisation based on the relationship between the residents' well-being score and other factors but also to understand that no change has a general effect for all areas. It is therefore important to identify the direct links in each of the measured areas. These findings also reject using performance measurement as a tool for copy-and-paste type of solutions. Management cannot conclude that simply because one type of measurement yielded desired results in one area, it would have the same effects in other areas as well if used in the same way. The changes that are correlated to the residents' well-being are unique, and despite six out of 24 factors have been found to be significant, no overlap has been observed across the categories *Residents,*

Personnel and *Economic management*. If the management wants to utilise the performance measurement as a tool to improve organisational performance, they need to establish clear and causal links between the desired outcome and independent variables and not rely on the surface level similarity (Ittner & Larcker, 2003).

Evaluation

As stated in *Correlation Results*, none of the posted questions that were part of the survey carried any statistical relevance when compared to the municipality score. If this does indeed represent the reality of how the evaluation of the performance measures is being used in the management of nursing homes, it might be deemed very problematic considering the fact that evaluating and updating the performance measures are an important part of utilising this system to drive improved performance (Anell, 2014; Ittner & Larcker, 2003; Marr, 2009). If an organisation is not careful in evaluating and updating its performance measures, it also becomes very difficult to identify in which areas there is room for improvement and where unnecessary resources are allocated (Elg, Broryd & Kollberg, 2013; Lim & Tang, 2000; Mannion & Braithwaite, 2012). It is worth noting that even though no statistically significant relations could be confirmed with regard to how the municipalities evaluated the performance measures, this itself does not necessarily mean that they are not using performance measures properly. It could rather be the case that they define what evaluation is differently than what was done in the questionnaire, thus not answering in a way that would represent the work being carried out in the given municipality.

Perceived Performance

The area *Perceived performance* yielded the greatest correlation result which is not surprising given the nature of the study. Individuals are more likely to participate in a study in which they are interested (Bryman & Bell, 2011), and as the questionnaire was sent out via email and answered on a voluntary basis, it can be assumed that the municipalities and districts which already work with and are interested in performance measuring were more likely to answer. The municipalities and districts also have access to the results of the Swedish National Board of Health and Welfare's (2020b) yearly survey and thus can somewhat examine their performance compared to the other municipalities. Thus, the results in the area *Perceived performance* might be skewed, as those interested in the area would have a better understanding of their own performance in relation to the other municipalities. Whilst the result of "the residents' happiness with personnel" with 3.84E-06 *** is interesting and has possible implications for further research, the findings do not carry any immediate managerial implications for practical implementation. This paper does not focus on whether the perceived performance in the self-evaluation and reflection of the organisational performance are driving factors for performance measurement, and thus, the majority of *Summary* in this *Discussion* will not focus on these results. Overall, there is a large amount of low P-values in the area which are interesting but less substantial in determining the outcome of this study.

Summary

Whilst not a hypothesis, there was an expectation between the authors of the study that the questions related to the category *Residents* would be most correlated to the municipality score and thus to the residents' self-assessed well-being. This expectation was based not only on a surface level similarity but also on the fact that the literature supports the importance of establishing a direct link between chosen measures and performance, and the category *Residents* seemed to be the most direct link (Anell, 2014; Ittner & Larcker, 2003). This bias to assume that these factors would be highly correlated is one of the issues managers and organisations implementing performance measurements must be wary of, as it creates a large risk of measuring and evaluating factors which are not linked to the organisational performance and the organisational goals (Elg, Broryd & Kollberg, 2013; Ittner & Larcker, 2003; Lim & Tang, 2000; Mannion & Braithwaite, 2012). Given the seemingly direct relationship between performance measures regarding the residents and their well-being, there existed a notion of a direct link. Considering that the primary output of the elderly care is supposed to be the quality and efficiency of the care provided, it would be natural to assume that the utilisation of the performance measures and changes to the measures in this category would be strong drivers and indicators of the quality of the service provided. The fact that this is not the case according to the results of this questionnaire is rather surprising and might indicate a misalignment between how the performance is measured and how the results are obtained. It is possible, however, that there is a very strong direct link between these factors, and the reason why it is not captured in this study could be due to the questions addressed in the survey not being relevant for the category *Residents* or that the municipalities simply under or overestimating the drivers in the category *Performance measures*. There is also the idea that the category *Residents* are highly important, but as established, if non-sequiturs or inappropriate measures are used, the result will not be heavily correlated and not be a good indicator or suitable as a driver (Anell, 2014; Ittner & Larcker, 2003). The area of *Changes* in the category *Economic management* within the municipal structure and in turn the nursing home sector as a heavy indicator is not surprising, as the managerial budget decisions dictate the two other categories *Residents* and *Personnel*, but the inverse is not necessarily true. The category *Economic management* governs not only the number of personnel or allocation for residence but also every other facet of the organisation. Given the large number of variables that are, or are close to, being statistically important in the category *Economic management*, it seems to be very important to govern performance measurement in the category *Economic management* more than the other two primary categories. When trying to use performance measurement as a tool for improving organisational performance, it is very important to establish a causal link between factors being measured and their effects on the outcome for the desired variable as previously discussed (Anell, 2014; Ittner & Larcker, 2003).

The findings in this study fall in line with the previous literature which provides the conclusion that the performance measurement is not a blanket solution or method to improve efficiency in an organisation (Anell, 2014; Ittner & Larcker, 2003; Marr, 2009; Pavlov & Bourne, 2010; Speklé & Verbeeten, 2014). The huge discrepancy between what

municipalities measure, how they value these measures and what actually leads to the desired outcome of achieving a higher level of the residents' well-being is a large hurdle in the area of implementation, utilisation and working with performance measurement (Ittner & Larcker, 2003). Primary examples of this, if not used for other purposes, is the frequency of measuring and following up in the category *Economic management* which primarily was once a month. Unless the respondents misinterpreted the question, using this as an indicator for performance measurement would be a large waste of time and resources as the frequency of following up in the category *Economic management* has very little relation to the residents' well-being.

The findings in this paper fall in line with the previous research supporting that working with performance measurement *can* improve organisational performance (Banker, Potter & Srinivasan, 2000; Davis & Albright, 2004; Hoque & James, 2000; Ittner, Larcker & Randall, 2003), particularly in healthcare organisations (Elg, Broryd & Kollberg, 2013; Lim & Tang, 2000; Mannion & Braithwaite, 2012). The findings in this paper, however, suggest that an organisation needs to take calculated and precise steps when doing so, otherwise considerable resources risk being wasted on measurements which are not correlated to the desired outcome (Ittner & Larcker, 2003; Marr, 2009). If improper measurements are used within the framework of performance measurement, the findings of this paper suggest that it can lead to decreased organisational performance as some previous research has suggested (Franco & Bourne, 2004; Perera, Harrison & Poole, 1997) or unclear to negligible outcome (Adair et al., 2003; Adair et al., 2004; Bourne, Kennerley & Franco-Santos, 2004). Thus, a municipality or district should not utilise performance measurement systems because others are doing it. Working with performance measuring is a continuous process, and the independent variables and measurements which are heavily connected to the residents' well-being found in this paper might change in the future. It is therefore recommended that factors, drivers and measurements are reexamined at certain intervals to determine if they are still relevant.

6.0 Conclusions

Does measuring performance lead to better self-assessed well-being for the residents of nursing homes?

The aim of this study was to examine whether measuring performance leads to improved self-assessed well-being for the residents of nursing homes. We believe that the data presented in this paper suggests that measuring performance can lead to improved self-assessed well-being amongst the residents of nursing homes if utilised correctly. If the municipality or district goes through the process of establishing a proper relationship between what is being measured and the desired outcome, they can reorganise their priorities to focus on improving any given factor and thus producing a better outcome regardless of on what level they are currently performing in that measurement. By viewing performance measuring as a tool to aid organisational performance and utilising it with precision, it can *most likely* yield positive organisational outcomes, but management and leadership need to be wary of treating it as a quick fix to solve organisational inefficiency.

6.1 Limitations

There are several limitations in regard to this thesis which are worth mentioning. First and foremost is the fact that the amount of respondents in comparison to the number of surveys sent out is rather low. As mentioned earlier, this is due to a number of factors including the ongoing Covid-19 pandemic which is putting a larger than normal strain on the municipalities and nursing homes in particular. Another factor that also impacted the amount of respondents was the time constraints. As a result of the survey being sent out close to winter holidays, representatives for some of the municipalities contacted back and explained that they were already overworked and that they did not have the time to answer the survey.

Judging by the results of the respondents and the positions they held, it is unclear how much authority and influence over the governance and management of nursing homes in each given municipality the respondents had, which might have given a skewed perspective of work in regard to how the performance was measured. There is also a risk of a respondent answering that certain measures are vital and highly important but the individual nursing homes in the municipalities not actually working with these measures in particular due to the lack of managerial oversight. Since this thesis was not focused on the actual implementation of performance measures, no conclusions can be drawn in this regard.

Worth considering is also the use of surveys as a method of gathering data for the thesis. It is possible that deeper insights could have been gleaned if interviews had been used as a supplement to clarify the answers received. This was, however, not done due to the limited time frame of the thesis.

6.2 Suggestions for future research

Whilst this paper has examined if measuring performance improves the residents' self-assessed well-being, it is important to note that the findings in this paper are not conclusive and further research is required. As suggested in *3.7 Data Analysis*, there is the possibility of deriving more detailed insights by evaluating each of the individual variables from the Swedish National Board of Health and Welfare's (2020b) survey against each of the answers in our own questionnaire. Through such a process, although time and resource intensive, the paper would have had the chance to create more thorough insights within the realm of performance measurement in the nursing home sector.

The respondents were from very different types of municipalities: from big cities to rural areas, from high GDP per capita to low or from high unemployment rate to low. The results might have been influenced by all of these factors, and controlling for these might yield clearer and more detailed insights if any of these factors influence performance measurement in the nursing home sector.

We would like to see a more detailed orientation in the field of performance measuring. This is because there is a risk of just observing outcomes, i.e. focusing on the successful organisations' performance measurements rather than realising that the performance measurement might be one of the reasons for their success. Despite being something that successful organisations work with, there might be other indicators or factors which might have led these organisations to their success; organisations with experienced and motivated management are perhaps more likely to use performance measurements in their organisation. Thus, it is not the performance measurement itself that is *necessarily* the driving factor behind the high level of organisational performance but rather the experienced and motivated management. Examining causal effects to a larger degree would be of great importance to the field as a whole.

References

Adair, C.E., Simpson, L., Birdsell, J.M., Omelchuk, K., Casebeer, A.L., Gardiner, H.P., Newman, S., Beckie, A., Clelland, S., Hayden, K.A. & Beausejour, P. (2003). Performance Measurement Systems in Health and Mental Health Services: Models, Practices and Effectiveness [pdf] Available online: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.195.2219&rep=rep1&type=pdf [Accessed 5 December 2020]

Adair, C.E., Simpson, E., Casebeer, A.L., Birdsell, J.M., Hayden, K.A. & Lewis, S. (2006). Performance Measurement in Healthcare: Part II – State of the Science Findings by Stage of the Performance Measurement Process, *Healthcare policy*, vol. 2, no. 1, pp. 56-78, Available online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2585424/pdf/policy-02-56.pdf [Accessed 4 December 2020]

Anell, A. (2010). Värden i vården – en ESO-rapport om målbaserad ersättning i hälso- och sjukvården [pdf] Available at: https://eso.expertgrupp.se/rapporter/20107-varden-i-varden-en-eso-rapport-om-malbaserad-ersattning-i-halso-och-sjukvarden/ [Accessed 19 November 2020]

Anell, A. (2014). Styrning i vården genom uppföljning av indikatorer på kvalitet och effektivitet [pdf] Available at: https://kefu.se/media/kefu/rapporter/anders_anell_20141120.pdf [Accessed 19 November 2020]

Angelis, J. & Jordahl, H. (2014). Att styra och leda äldreomsorg. Hur går det till och vad kan förbättras?. Stockholm: Exakta Printing AB

Balaboniene, I., & Vecerskiene, G. (2015) The Aspects of Performance Measurement in Public Sector Organization*, Procedia - Social and Behavioral Sciences,* vol. 213, pp. 314-320. Elsevier Ltd

Banker, R.D., Potter, G. & Srinivasan, D. (2000). An empirical investigation of an incentive plan that includes non financial measures, *The Accounting Review*, Vol. 75, No. 1, pp. 65–92, Available Online: https://www.jstor.org/stable/pdf/248633.pdf?casa_token=RVHU-JDV8wsAAAAA:IGgdRC1zsnJJA9pfGE0sz6gcCW1UAVWGnPCVBc57aLYYiBrhmFK9uk3gQNt-y6jmhOf60NabjavIHaUQBxBMX1UY1OUzsyOFwX2k6pdDa9mbLxYj4dE [Accessed 29 December 2020]

Blomkvist, P., Hallin, A., & Lindell, E. (2018). Metod för företagsekonomer: Uppsats enligt 4-stegsmodellen. Lund: Studentlitteratur AB

Bock, T. (n.d). What is a correlation matrix, Available online: https://www.displayr.com/what-is-a-correlation-matrix/ [Accessed 2 January 2021]

Bourne, M., Kennerley, M. & Franco, M. (2005). Managing through measures: a study of impact on performance, *Journal of Manufacturing Technology Management*, [e-journal] vol. 16, no. 4, pp. 373-395, Available through: LUSEM Library website https://www-emerald-cohttps://www-emerald-com.ludwig.lub.lu.se/insight/content/doi/10.1108/17410380510594480/full/pdf?title=managing-through-measures-a-study-of-impact-on-performancem.ludwig.lub.lu.se/insight/content/doi/10.1108/17410380510594480/full/pdf?title=managing-through-measures-a-study-of-impact-on-performance [Accessed 29 December 2020]

Boyce, W.E., & DiPrima, R.C. (2012). Elementary differential equations, 10th edn, Hoboken: John Wiley & Sons.

Brorström, B. (1997). För den goda redovisningsseden. Lund: Studentlitteratur AB

Bryman, A., & Bell, E. (2011). Företagsekonomiska forskningsmetoder, 2nd edn, Stockholm: Liber.

Dambrin, C. & Robson, K. (2011) Tracing performance in the pharmaceutical industry: Ambivalence, opacity and the performativity of flawed measures, *Accounting, Organizations and Society*, vol. 36, no. 7, pp. 428-455. Available online: https://www.sciencedirect.com/science/article/abs/pii/S0361368211000663 [Accessed 15 December]

Davis, S. & Albright, T. (2004). An investigation of the effect of Balanced Scorecard implementation on financial performance, *Management Accounting Research*, vol. 15, no. 2, pp. 135-153, Available Online: http://www.managementaccounting.info/wp-content/uploads/2015/11/An-investigation-of-the-effect-of-Balanced-Scorecard.pdf [Accessed 29 December 2020]

Devore, J. L. (2015). Probability and Statistics for Engineering and the Sciences, 9th edn, Boston: Cengage Learning.

Elg, M., Broryd, K.P. & Kollberg, B. (2013). Performance measurement to drive improvements in healthcare practice, *International Journal of Operations & Production Management,* [e-journal] vol. 33, no. 11/12, pp. 1623-1651, Available through: LUSEM Library website https://www-emerald-com.ludwig.lub.lu.se/insight/content/doi/10.1108/IJOPM-07-2010-0208/full/html [Accessed 3 December 2020]

Evans, J. (2004). An exploratory study of performance measurement systems and relationships with performance results, *Journal of Operations Management*, vol. 22, no. 3, pp. 219-232, Available online: https://onlinelibrary.wiley.com/doi/pdf/10.1016/j.jom.2004.01.002?casa_token=c1LGLHMBt

U0AAAAA:O32lwnnFNP1rm4JAMxnKFYhTK63eMDIlpMqjiOX3mUj8qTa7PGK3B0Ofu
ZyUpjoj8xlUAVJIh7A3ag [Accessed 3 December 2020]

Fotheringham, A. S., Brunsdon, C., & Charlton, M. (2002). Geographically weighted
regression: the analysis of spatially varying relationships. Hoboken: John Wiley & Sons.

Fowler, F. (2002). Survey Research Methods, 3rd edn, California: Sage Publications Inc

Franco, M. & Bourne, M. (2004). Are strategic performance measurement systems really
effective: a closer look at the evidence, *Proceedings of the EurOMA 11th annual conference*,
Available online:
https://www.researchgate.net/profile/Monica_Franco-Santos/publication/285453585_Are_str
ategic_performance_measurement_systems_really_effective_A_closer_look_at_the_evidence
/links/5783b30308ae3f355b4a28fa.pdf [Accessed 29 December 2020]

Ghauri, P., & Gronhaug, K. (2010). Research Methods in Business studies: A practical Guide,
4th edn, New Jersey: Prentice Hall

Holström, C. (2020). Kommunernas kostnader och intäkter, Avaible online:
https://www.ekonomifakta.se/Fakta/Offentlig-ekonomi/kommunal-ekonomi/kommunernas-k
ostnader-kostnader-och-intakter/ [Accessed 19 November 2020]

Hoque, Z. & James, W. (2000). Linking Balanced Scorecard Measures to Size and Market
Factors: Impact on Organizational Performance, *Journal of Management Accounting
Research*, vol. 12, pp. 1-17, Available online:
https://www.ftms.edu.my/images/Document/MOD001182%20-%20IMPROVING%20ORGA
NISATIONAL%20PERFORMANCE/BSCSizeMarketFactorsImpactOrgPerformance.pdf
[Accessed 29 December 2020]

Ittner, C.D. & Larcker, D.F. (1998) Are Nonfinancial Measures Leading Indicators of
Financial Performance? An Analysis of Customer Satisfaction, *Journal of Accounting
Research*, vol. 36, no. 3, pp. 1-35, Available online:
https://www.jstor.org/stable/pdf/2491304.pdf?casa_token=F1KY90-NojQAAAAA:fHBXswi
E9trzzAB2vS6zZIUUAOx1t4FYCP-hMNx4ANDtbozs_g_iQ8G47QhMSKmc7ntfe404-wP3
Yk58ZxZkbR9mytsy4Zt91OpignFQyCDWsL8_bo4 [Accessed 29 December 2020]]

Ittner, C.D. & Larcker, D.F. (2003) Coming up short on nonfinancial performance
measurement, Brighton: Harvard Business Publishing

Ittner, C.D. & Larcker, D.F. & Randall, T. (2003). Performance implications of strategic
performance measurement in financial services firms, *Accounting, Organizations and
Society*, [e-journal] vol. 28, no. 7, pp. 715-741, Available through: LUSEM Library website
https://doi-org.ludwig.lub.lu.se/10.1016/S0361-3682(03)00033-3 [Accessed 29 December
2020]

Ivers, N., Jamtvedt, G., Flottorp, S., Young, J.M., Odgaard-Jensen, J., French, S.D., O'Brien, M.A., Johansen, M., Grimshaw, J., Oxman, A.D. (2012). Audit and feedback: effects on professional practice and healthcare outcomes, *Cochrane Database of Systematic Reviews*, No. 6., Available Online: https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD000259.pub3/abstract [Accessed 19 November 2020]

Jin, L. (2011). Improving response rate in web surveys with default setting. The effect of default on web survey participation and permission. *International Journal of Market Research.* vol. 53, no. 1, pp. 75-79. Available online: https://journals.sagepub.com/doi/abs/10.2501/IJMR-53-1-075-094 [Accessed 27 December 2020]

Laerd Statistics. (n.d.). Cronbach's Alpha (α) using SPSS Statistics, Available Online: https://statistics.laerd.com/spss-tutorials/cronbachs-alpha-using-spss-statistics.php [Accessed 6 January 2021]

Lim, P.C. & Tang, N.K.H. (2000). The development of a model for total quality healthcare, *An International Journal*, [e-journal] vol. 10, no. 2, pp. 103-111, Available online: LUSEM Library website https://www-emerald-com.ludwig.lub.lu.se/insight/content/doi/10.1108/09604520010318290/full/pdf?title=the-development-of-a-model-for-total-quality-healthcare [Accessed 29 December 2020]

Mannion, R. & Braithwaite, J. (2012). Unintended consequences of performance measurement in healthcare: 20 salutary lessons from the English National Health Service, *Internal Medicine Journal*, vol. 42, no. 5, pp. 569-574, Available online: https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1445-5994.2012.02766.x?casa_token=i5Tiy12-iA4AAAAA:5mgjDVavUIYSSxKlNJkRQjqSH446yyI12Kb0OrIeXXalySjRE37y95cwVX70gkKQvaMnHmxmiHFoUg [Accessed 3 December 2020]

Preem, M.S. (1995). Introductory Statistics, 2nd edn, Hoboken: John Wiley & Sons

Marr, B. (2009). Managing and delivering performance, Oxford: Elsevier

Montgomery, D. C., Peck, E. A., & Vining, G. G. (2012). Introduction to linear regression analysis, Vol. 821, Hoboken: John Wiley & Sons.

Moullin, M. (2002), Delivering Excellence in Health and Social Care, Buckingham: Open University Press.

Neely, A. (2008). Does the balanced scorecard work: an empirical investigation [pdf] Available at:

https://dspace.lib.cranfield.ac.uk/bitstream/handle/1826/3932/Does_the_balanced_scorecard_work-RP1-08.pdf?sequence=1&isAllowed=y [Accessed 29 December 2020]

Pavlov, A. & Bourne, M. (2010). Explaining the effects of performance measurement on performance : An organizational routines perspective, *International Journal of Operations & Production Management*, [e-journal] vol. 31, no. 1, pp. 101-122, Available online: LUSEM Library website https://www-emerald-com.ludwig.lub.lu.se/insight/content/doi/10.1108/01443571111098762/full/html [Accessed 30 November 2020]

Perera, S., Harrison, G. & Poole, M. Accounting (1997). Customer-focused manufacturing strategy and the use of operations-based non-financial performance measures: a research note, *Organizations & Society*, [e-journal] vol. 22, no. 6, pp. 557-572, Available online: LUSEM Library website https://doi.org/10.1016/S0361-3682(96)00048-7 [Accessed 29 December 2020]

Saunders, M., Lewis, P. and Thornhill, A. (2016). Research Methods for Business Students, 5th edition, Harlow: Pearson Education Limited.

Speklé, R.F. & Verbeeten, F.H.M. (2014). The use of performance measurement systems in the public sector: Effects on performance, *Management Accounting Research*, vol. 25, no. 2, pp. 131-146, Available online: https://www.sciencedirect.com/science/article/abs/pii/S1044500513000693 [Accessed 29 December 2020]

Stevens, S.S. (1946). On the Theory of Scales of Measurement, *Science,* vol. 103, no. 2684, pp. 677–680, Available online: https://psychology.okstate.edu/faculty/jgrice/psyc3214/Stevens_FourScales_1946.pdf [Accessed 26 December 2020]

Swedish Association of Local Authorities and Regions. (2019). Handbok för effektiv äldreomsorg – en handfast guide till ökad kvalitet och lägre kostnader [pdf] Available online: https://webbutik.skr.se/bilder/artiklar/pdf/5495.pdf?issuusl=ignore [Accessed 30 November 2020]

Swedish Association of Local Authorities and Regions. (2020). Koll på äldreomsorgen 1.28 [Microsoft Excel spreadsheet] Available at: https://www.rka.nu/analys/stodochomsorg/kollpaaldreomsorgen.2673.html [Accessed 30 November 2020]

Swedish National Board of Health and Welfare. (2020a). Handbok för utveckling av indikatorer För god vård och omsorg [pdf] Available online: https://www.socialstyrelsen.se/globalassets/sharepoint-dokument/artikelkatalog/handbocker/2020-8-6877.pdf [Accessed 6 December 2020]

Swedish National Board of Health and Welfare. (2020b). Vad tycker de äldre om äldreomsorgen, 2020? [pdf] Available at: https://www.socialstyrelsen.se/statistik-och-data/oppna-jamforelser/socialtjanst/aldreomsorg/vad-tycker-de-aldre-om-aldreomsorgen/ [Accessed 19 November 2020]

Österlind, M-L. (2013). Construing and re-construing municipal care management: Swedish social care managers reflect over their work situation and their role. PHD Thesis, Kristianstad University, Available online: http://hkr.diva-portal.org/smash/get/diva2:616268/FULLTEXT01.pdf [Accessed 24 November 2020]

Appendix

Appendix 1. Questionnaire

Allmän Introduktion

Denna enkät kommer att ställa ett antal frågor om hur er kommun hanterar och bearbetar målsättningar samt prestationsmätning kopplat till *äldreboenden* i er kommun. Enkäten har gått ut till samtliga kommuner i Sverige för att skapa ett så brett urval som möjligt. Det är därför oerhört värdefullt att ni deltar för endast ni kan ge en reflektion av er kommun.

Frågorna i nedanstående enkät kommer att behandla fyra huvudsakliga områden: *1)* Brukarna själva, *2)* personalen som arbetar på äldreboenden, *3)* ekonomisk målsättning och prestationsmätning samt *4)* slutligen frågor om er övergripande uppfattning. Varje område kommer att introduceras närmare under respektive avsnitt. Enkäten och dess frågor kommer huvudsakligen ha fasta svarsalternativ. Vänligen svara på frågorna med utgångspunkt från normala omständigheter, det vill säga beakta inte hur pandemin under 2020 har påverkat ert arbete.

Med prestationsmått i kontexten för denna enkät avses olika finansiella och icke-finansiella mått som kan användas för att utvärdera och styra verksamheten som bedrivs. Dessa mått brukar vara kopplade till de övergripande mål och strategier som en organisation har. Exempel på finansiella prestationsmått är kostnad per brukare, och exempel på icke-finansiella prestationsmått är brukarnöjdhet.

Allmän Information

1. Vad är ert namn?

2. Vilken kommun representerar ni?

3. Vilken befattning har ni?
   - Socialchef
   - Förvaltningschef
   - Omsorgschef
   - Verksamhetschef
   - Äldrechef
   - Annat:

4. Hur många har år har du arbetat inom kommunen?

- 0-2
- 3-4
- 5-6
- 7-8
- 9-10
- Fler än 10 år

5. Hur många år har du haft din nuvarande befattning?
- 0-2
- 3-4
- 5-6
- 7-8
- 9-10
- Fler än 10 år

6. Vänligen ange motsvarande hur många heltidstjänster som är verksamma inom äldreboenden inom er kommun? *Både privat och kommunalt.*

7. Vänligen ange hur många brukare har ni på äldreboenden inom er kommun? *Både privat och kommunalt.*

Delområde 1: Brukare
Denna del av enkäten behandlar frågor om prestationsmått kopplade till brukare på äldreboenden specifikt, dvs. inte de som nyttjar hemtjänst eller andra kommunala tjänster för de äldre.

8. Ange vilka av nedanstående prestationsmått ni mäter samt hur viktiga dessa är för att styra (dvs. planera, följa upp, utvärdera) verksamheten på äldreboendena. Om ni använder er av andra prestationsmått än nedanstående kan ni fylla i detta på 8F.

A) Upplevd ensamhet hos brukaren (Om ni ej mäter vänligen välj 0)
Oviktigt 0 - 7 Mycket viktigt

B) Trivsel med erbjudna aktiviteter (Om ni ej mäter vänligen välj 0)
Oviktigt 0 - 7 Mycket viktigt

C) Allmänt mående (utsträckning) (Om ni ej mäter vänligen välj 0)
Oviktigt 0 - 7 Mycket viktigt

D) Trivsel med medboende (Om ni ej mäter vänligen välj 0)
Oviktigt 0 - 7 Mycket viktigt

E) Trivsel med personal (Om ni ej mäter vänligen välj 0)

Oviktigt 0 - 7 Mycket viktigt

F) (Valfri) Vid användning av andra mått fyll i benämningen och nummer 1–7 hur viktiga dessa är.

9. Hur ofta följer ni upp resultatet av dessa prestationsmätningar inom området brukare?
   - Inte alls
   - Veckovis
   - Månadsvis
   - Kvartalsvis
   - Årsvis
   - Vartannat år
   - Vart fjärde år

10. I vilken utsträckning uppnår ni era uppställda mål som mätt med hjälp av prestationsmåtten? Om ni använder er av andra prestationsmått än nedanstående kan ni fylla i detta på 10F.

A) Upplevd ensamhet hos brukaren (Om ni ej har detta mål vänligen välj 0)

I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

B) Trivsel med erbjudna aktiviteter (Om ni ej har detta mål vänligen välj 0)

I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

C) Allmänt mående (Om ni ej har detta mål vänligen välj 0)

I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

D) Trivsel med medboende (Om ni ej har detta mål vänligen välj 0)

I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

E) Trivsel med personal (Om ni ej har detta mål vänligen välj 0)

I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

F) (Valfri) Vid användning av andra mål fyll i benämningen och nummer 1–7 i vilken utsträckning ni når era mål.

11. I vilken utsträckning sker planering, uppföljning och utvärdering angående resultaten av prestationsmått inom området brukare?

   - På enhetsnivå

     Inte i någon utsträckning 1 - 7 I mycket stor utsträckning

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- På förvaltningsnivå

    Inte i någon utsträckning 1 - 7 I mycket stor utsträckning

- På kommunal nivå

    Inte i någon utsträckning 1-7 I mycket stor utsträckning

12. I vilken utsträckning leder resultaten i prestationsmätning inom området brukare till förändringar inom följande område? Om det leder till andra förändringar i verksamheten än de som nämns kan ni fylla i det på 12I.

A) Förändringar i budget (Om ni ej vet vänligen välj 0)

    I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

B) Förändringar i personalallokering (Om ni ej vet vänligen välj 0)

    I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

C) Förändringar i boendeallokering (Om ni ej vet vänligen välj 0)

    I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

D) Förändringar i policy och regler (Om ni ej vet vänligen välj 0)

    I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

E) Förändringar i personalutbildning (Om ni ej vet vänligen välj 0)

    I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

F) Förändringar i prestationsmätningssystem (Om ni ej vet vänligen välj 0)

    I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

G) Förändringar i arbetsrutiner (Om ni ej vet vänligen välj 0)

    I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

H) Förändringar i arbetsmiljö (Om ni ej vet vänligen välj 0)

    I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

I) (Valfri) Vid andra förändringar fyll i benämningen och nummer 1–7 i vilken utsträckning det förändras.

Delområde 2: Personal

Denna del av enkäten behandlar frågor om prestationsmått kopplade till personalen som specifikt arbetar med äldreboenden, dvs. inte hemtjänst eller andra kommunala tjänster för de äldre.

13. Ange vilka av nedanstående prestationsmått ni mäter samt hur viktiga dessa är för att styra (dvs. planera, följa upp, utvärdera) verksamheten på äldreboendena. Om ni använder er av andra prestationsmått än nedanstående kan ni fylla i detta på 13G.

A) Andel personal som känner att de kan utföra sina arbetsuppgifter till den förväntade standarden (Om ni ej mäter vänligen välj 0)

Oviktigt 0 - 7 Mycket viktigt

B) Andel personal som känner att de får stöttning från sin chefer och medarbetare i arbetet (Om ni ej mäter vänligen välj 0)

Oviktigt 0 - 7 Mycket viktigt

C) Andel personal som känner att prioriteringen bland deras uppgifter är tydlig (Om ni ej mäter vänligen välj 0)

Oviktigt 0 - 7 Mycket viktigt

D) Andel personal som anser att deras arbetsplats utför sitt uppdrag till en hög standard (Om ni ej mäter vänligen välj 0)

Oviktigt 0 - 7 Mycket viktigt

E) Andel personal som upplever att dokumentering på boendet är på en god nivå (Om ni ej mäter vänligen välj 0)

Oviktigt 0 - 7 Mycket viktigt

F) Genomsnittligt antal sjukdagar per anställd (Om ni ej mäter vänligen välj 0)

Oviktigt 0 - 7 Mycket viktigt

G) (Valfri) Vid användning av andra mått fyll i benämningen och nummer 1–7 hur viktiga dessa är.

14. Hur ofta följer ni upp resultatet av dessa prestationsmätningar inom området personal?
   - Inte alls
   - Veckovis
   - Månadsvis
   - Kvartalsvis
   - Årsvis
   - Vartannat år
   - Vart fjärde år

15. I vilken utsträckning uppnår ni era uppställda mål som mätt med hjälp av prestationsmåtten? Om ni använder er av andra prestationsmått än nedanstående kan ni fylla i detta på 15G.

A) Andel personal som känner att de kan utföra sina arbetsuppgifter till den förväntade standarden (Om ni ej har detta mål vänligen välj 0)

I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

B) Andel personal som känner att de får stöttning från sina chefer och medarbetare i arbetet (Om ni ej har detta mål vänligen välj 0)

I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

C) Andel personal som känner att prioriteringen bland deras uppgifter är tydlig (Om ni ej har detta mål vänligen välj 0)

I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

D) Andel personal som anser att deras arbetsplats utför sitt uppdrag till en hög standard (Om ni ej har detta mål vänligen välj 0)

I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

E) Andel personal som upplever att dokumentering på boendet är på en god nivå (Om ni ej har detta mål vänligen välj 0)

I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

F) Genomsnittligt antal sjukdagar per anställd (Om ni ej har detta mål vänligen välj 0)

I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

G) (Valfri) Vid användning av andra mål fyll i benämningen och nummer 1–7 i vilken utsträckning ni når era mål.

16. I vilken utsträckning sker planering, uppföljning och utvärdering angående resultaten av prestationsmått inom området personal?
   - På enhetsnivå:

        Inte i någon utsträckning 1 - 7 I mycket stor utsträckning
   - På förvaltningsnivå:

        Inte i någon utsträckning 1 - 7 I mycket stor utsträckning
   - På kommunal nivå:

        Inte i någon utsträckning 1 - 7 I mycket stor utsträckning

17. I vilken utsträckning leder resultaten i prestationsmätning inom området personal till förändringar inom följande område? Om det leder till andra förändringar i verksamheten kan ni fylla i det på 17I.

A) Förändringar i budget (Om ni ej vet vänligen välj 0)

> I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

B) Förändringar i personalallokering (Om ni ej vet vänligen välj 0)

> I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

C) Förändringar i boendeallokering (Om ni ej vet vänligen välj 0)

> I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

D) Förändringar i policy och regler (Om ni ej vet vänligen välj 0)

> I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

E) Förändringar i personalutbildning (Om ni ej vet vänligen välj 0)

> I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

F) Förändringar i prestationsmätningssystem (Om ni ej vet vänligen välj 0)

> I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

G) Förändringar i arbetsrutiner (Om ni ej vet vänligen välj 0)

> I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

H) Förändringar i arbetsmiljö (Om ni ej vet vänligen välj 0)

> I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

I) (Valfri) Vid andra förändringar fyll i benämningen och nummer 1–7 i vilken utsträckning det förändras.

Delområde 3: Ekonomi

Denna del av enkäten behandlar frågor om prestationsmått gällande ekonomin kopplad till äldreboenden.

18. Ange vilka av nedanstående prestationsmått ni mäter samt hur viktiga dessa är för att styra (dvs. planera, följa upp, utvärdera) verksamheten på äldreboendena. Om ni använder er av andra prestationsmått än nedanstående kan ni fylla i detta på 18H.

A) Total kostnad (inklusive lokalkostnader) per brukare på äldreboende, per år (Om ni ej mäter vänligen välj 0)

> Oviktig 0 - 7 Mycket viktig

B) Kostnad per brukare per år (Om ni ej mäter vänligen välj 0)

<div align="center">Oviktig 0 - 7 Mycket viktig</div>

C) Nettokostnad per brukare per år (Om ni ej mäter vänligen välj 0)

<div align="center">Oviktig 0 - 7 Mycket viktig</div>

D) Personalkostnad per brukare per år (Om ni ej mäter vänligen välj 0)

<div align="center">Oviktig 0 - 7 Mycket viktig</div>

E) Väntetid i antal dagar från ansökningsdatum till första erbjudna inflyttningsdatum till särskilt boende (Om ni ej mäter vänligen välj 0)

<div align="center">Oviktig 0 - 7 Mycket viktig</div>

F) Nettokostnadsavvikelse (avvikelse mellan nettokostnad och referenskostnad för äldreomsorg) (Om ni ej mäter vänligen välj 0)

<div align="center">Oviktig 0 - 7 Mycket viktig</div>

G) Kostnadsutveckling över tid (Om ni ej mäter vänligen välj 0)

<div align="center">Oviktig 0 - 7 Mycket viktig</div>

H) (Valfri) Vid användning av andra mått fyll i benämningen och nummer 1–7 hur viktiga dessa är.

19. Hur ofta följer ni upp resultatet av dessa prestationsmätningar?
   - Inte alls
   - Veckovis
   - Månadsvis
   - Kvartalsvis
   - Årsvis
   - Vartannat år
   - Vart fjärde år

20. I vilken utsträckning uppnår ni era uppställda mål som mätt med hjälp av prestationsmåtten? Om ni använder er av andra prestationsmått än nedanstående kan ni fylla i detta på 20F.

A) Total kostnad (inklusive lokalkostnader) per brukare på äldreboende, per år (Om ni ej har detta mål vänligen välj 0)

<div align="center">I mycket liten utsträckning 0 - 7 I mycket stor utsträckning</div>

B) Kostnad per brukare per år (Om ni ej har detta mål vänligen välj 0)

<div align="center">I mycket liten utsträckning 0 - 7 I mycket stor utsträckning</div>

C) Nettokostnad per brukare per år (Om ni ej har detta mål vänligen välj 0)

        I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

D) Personalkostnad per brukare per år (Om ni ej har detta mål vänligen välj 0)

        I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

E) Väntetid i antal dagar från ansökningsdatum till första erbjudna inflyttningsdatum till särskilt boende (Om ni ej har detta mål vänligen välj 0)

        I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

F) Nettokostnadsavvikelse (avvikelse mellan nettokostnad och referenskostnad för äldreomsorg) (Om ni ej har detta mål vänligen välj 0)

        I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

G) Kostnadsutveckling över tid (Om ni ej har detta mål vänligen välj 0)

        I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

H) (Valfri) Vid användning av andra mål fyll i benämningen och nummer 1–7 i vilken utsträckning ni når era mål.

21. I vilken utsträckning sker planering, uppföljning och utvärdering angående resultaten av prestationsmått inom området ekonomi?

      På enhetsnivå

            Inte i någon utsträckning 1-7 I mycket stor utsträckning

      På förvaltningsnivå

            Inte i någon utsträckning 1-7 I mycket stor utsträckning

      På kommunal nivå

            Inte i någon utsträckning 1-7 I mycket stor utsträckning

22. I vilken utsträckning leder resultaten i prestationsmätning inom området ekonomi till förändringar inom följande område? Om det leder till andra förändringar i verksamheten kan ni fylla i det på 22I.

A) Förändringar i budget (Om ni ej vet vänligen välj 0)

        I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

B) Förändringar i personalallokering (Om ni ej vet vänligen välj 0)

        I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

C) Förändringar i boendeallokering (Om ni ej vet vänligen välj 0)

        I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

D) Förändringar i policy och regler (Om ni ej vet vänligen välj 0)

E) Förändringar i personalutbildning (Om ni ej vet vänligen välj 0)

I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

F) Förändringar i prestationsmätningssystem (Om ni ej vet vänligen välj 0)

I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

G) Förändringar i arbetsrutiner (Om ni ej vet vänligen välj 0)

I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

H) Förändringar i arbetsmiljö (Om ni ej vet vänligen välj 0)

I mycket liten utsträckning 0 - 7 I mycket stor utsträckning

I) (Valfri) Vid andra förändringar fyll i benämningen och nummer 1–7 i vilken utsträckning det förändras.

Övergripande uppfattning
Denna del av enkäten behandlar frågor om er övergripande uppfattning av nedanstående faktorer.

23. Hur viktigt är det att mäta prestationsmått inom respektive område för att nå en så hög brukartrivsel som möjligt?

Brukare

Inte alls viktigt 1-7 Väldigt viktigt

Personal

Inte alls viktigt 1-7 Väldigt viktigt

Ekonomi

Inte alls viktigt 1-7 Väldigt viktigt

24. Hur bra upplever ni att er kommun presterar i jämförelse med andra kommuner?

Brukarnas övergripande trivsel

Presterar mycket sämre 1-7 Presterar mycket bättre

Brukarnas trivsel med boende

Presterar mycket sämre 1-7 Presterar mycket bättre

Brukarnas trivsel med personalen

Presterar mycket sämre 1-7 Presterar mycket bättre

Brukarnas upplevda ensamhet

Presterar mycket sämre 1-7 Presterar mycket bättre

Budgetering inom äldreboenden

Presterar mycket sämre 1-7 Presterar mycket bättre

Arbetsrutiner på äldreboenden
> Presterar mycket sämre 1-7 Presterar mycket bättre

Dokumentation på äldreboenden
> Presterar mycket sämre 1-7 Presterar mycket bättre

Personalkompetens på äldreboenden
> Presterar mycket sämre 1-7 Presterar mycket bättre

Chefernas kompetens på enhetsnivå inom äldreboenden
> Presterar mycket sämre 1-7 Presterar mycket bättre

Kvalitetssäkring av prestationsmått
> Presterar mycket sämre 1-7 Presterar mycket bättre

Medicinsk Revision
> Presterar mycket sämre 1-7 Presterar mycket bättre

Kostnadnivå per brukare
> Presterar mycket sämre 1-7 Presterar mycket bättre