

Fall 2022

EMPLOYEE RETENTION IN ROTATIONAL MOLDING PLASTIC ORGANIZATIONS

Paula R. Orcutt
Southeastern University - Lakeland

Follow this and additional works at: <https://firescholars.seu.edu/coe>



Part of the [Business Administration, Management, and Operations Commons](#), and the [Education Commons](#)

Recommended Citation

Orcutt, Paula R., "EMPLOYEE RETENTION IN ROTATIONAL MOLDING PLASTIC ORGANIZATIONS" (2022).
Doctor of Education (Ed.D). 130.
<https://firescholars.seu.edu/coe/130>

This Dissertation is brought to you for free and open access by FireScholars. It has been accepted for inclusion in Doctor of Education (Ed.D) by an authorized administrator of FireScholars. For more information, please contact firescholars@seu.edu.

EMPLOYEE RETENTION IN ROTATIONAL MOLDING PLASTIC ORGANIZATIONS

By

PAULA R. CHISHOLM ORCUTT

A doctoral dissertation submitted to the
College of Education
in partial fulfillment of the requirements
for the degree Doctor of Education
in Organizational Leadership

Southeastern University
August 22, 2022

EMPLOYEE RETENTION IN ROTATIONAL MOLDING PLASTIC ORGANIZATIONS

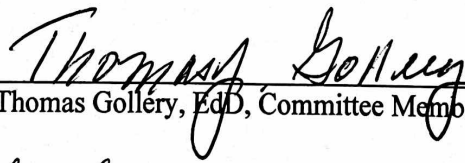
by

PAULA R. CHISHOLM ORCUTT

Dissertation Approved:



Lisa Coscia, EdD, Dissertation Chair



Thomas Gollery, EdD, Committee Member



Lisa Coscia, EdD, Dean, College of Education

DEDICATION

I would like to dedicate this study to my husband, David, who knew how important this was to me and encouraged me to keep writing when I wanted to give up. To my children, Robert, Danny, Amanda, and Rachael, I've always encouraged you to do your best in all that you do; I thank you for your support, encouragement, and reminder to keep working and do my best. To my parents, Robert and Glenna, who knew of my dream to achieve a doctorate degree and were so interested in my progress but unfortunately, both passed away before I was able to complete my dissertation. I know they would have been proud. Thank you to my friends, especially Delight Carmichael, who continued to check in and keep me on track when life got in the way.

ACKNOWLEDGMENTS

I want to thank Dr. Lisa Coscia, my dissertation chair, for supporting me on this dissertation journey. The process took longer than I had hoped, but you were there from the beginning, kindly guiding me along the way and celebrating my successful completion. To Dr. Thomas Gollery, my methodologist, your journey at Southeastern University began with our group, Cohort A. I'm thankful for your guidance, your passion for education, and your willingness to see me through this process. Dr. Mary Ann Quartetti, Dr. Kelly Oglialoro, Dr. Candi Ring, and the rest of Cohort A at Southeastern University, thank you for your kindness, support, and friendship.

Abstract

This non-experimental, quantitative study examined employee retention in rotational molding plastic manufacturing organizations by surveying machine operators and finishers in the industry. The researcher distributed a 30-question Likert survey in English and Spanish in rotational molding plastic manufacturing organizations across the United States to determine the factors that contribute to employee retention. This research study examined employee culture, job satisfaction, motivation, nature of work, and self-sacrifice as factors that contribute to employee retention in the rotational molding plastic manufacturing industry. The information from 210 surveys revealed a statistically significant response for study participant perceptions of employee job retention within the rotational molding plastic industry. Motivator factors statistically significantly predicted employee job retention, and job satisfaction was statistically significantly predictive of employee job retention. The purpose of this study is to assist employers as they make informed decisions and design ways to retain employees.

Keywords: Employee retention, job satisfaction, motivator factors, rotational molding

TABLE OF CONTENTS

Dedication.....	iii
Acknowledgments.....	iv
Abstract.....	v
Table of Contents	vi
List of Tables.....	ix
List of Figures.....	x
I. INTRODUCTION.....	1
Background of the Study	2
Conceptual Framework.....	4
Theoretical Foundation	5
Problem Statement.....	5
Purpose Statement.....	5
Overview of Methodology.....	5
Research Design	5
Sample Selection	6
Response Rate.....	7
Research Questions.....	7
Research Hypotheses.....	7
Overview of Analyses.....	8
Preliminary Analyses.....	9
Data Analysis by Research Questions	9
Limitations	10
Definition of Key Terms	10
Significance.....	11
II. REVIEW OF LITERATURE.....	12
Employee Retention.....	12

Herzberg Motivation Hygiene Theory	15
Motivational Factors	15
Hygiene Factors	15
Contributing Factors	16
Culture	16
Job Satisfaction	18
Motivation.....	20
Nature of Work	22
Self-Sacrifice	24
Summary	26
III. METHODOLOGY	27
Description of Methodology	27
Participants	27
Instrument	28
Validity of Likert-Type Survey.....	28
Reliability of Likert-Type Survey.....	29
Procedures.....	29
Data Analysis	30
Preliminary Analysis	31
Research Question 1	31
Research Question 2	32
Research Question 3	32
Summary	32
IV. RESULTS.....	33
Methods of Data Collection	33
Data Analysis by Research Question	34
Descriptive Statistics: Demography	34
Descriptive Statistics: Broad Dimensions	36
Missing Data/Survey Completion Rate	36
Internal Reliability	37
Findings by Research Question	37

Research Question 1	38
Hypothesis	38
Analysis	38
Findings	39
Research Question 2	39
Hypothesis	40
Analysis	40
Findings	41
Research Question 3	41
Hypothesis	41
Analysis	42
Findings	42
Summary	43
V. DISCUSSION.....	44
Review of Methodology	44
Summary of Results.....	44
Discussion by Research Question.....	45
Research Question 1	45
Research Question 2	47
Research Question 3	49
Study Limitations.....	51
Implications for Future Practice.....	52
Recommendations for Future Research	53
Conclusion	54
References.....	55
Appendix A	62
Appendix B.....	65

LIST OF TABLES

Table	Page
Table 1: Descriptive Statistics Summary: Demographic Identifying Information	35
Table 2: Descriptive Statistics Summary: Five Dimensions	35
Table 3: Descriptive Statistics Summary: Broad Dimensions	36
Table 4: Internal Reliability Summary: All Survey Items on the Research Instrument.....	37
Table 5: Perceptions of Employee Retention.....	39
Table 6: Predicting Employee Job Retention by the Dimensions of Self-Sacrifice, Organizational Culture, Nature of Work, Motivation, and Job Satisfaction.....	40
Table 7: Predicting Employee Job Retention by Broad Dimensions: Hygiene Factors and Motivator Factors.....	42

LIST OF FIGURES

Figure	Page
Figure 1: Factors Affecting Employee Retention	4

I. INTRODUCTION

Across the plastic manufacturing industry, organizational leaders find employee retention a critical area of concern. A recent *State of the Industry Report* from the Manufacturers Association for Plastics Processors (2017) in Indianapolis surveyed executives across the industry and found that 92% stated that the top issue for 2017 was employee retention. The numbers have doubled since 2012 (Toloken, 2017). Presently, studies are limited and difficult to find on plastic manufacturing and the factors that affect employee retention, which drives the need for this study.

This research study examined employee culture, job satisfaction, motivation, nature of work, and self-sacrifice as factors that contribute to employee retention in the rotational molding plastic manufacturing industry. The researcher conducted a quantitative 5-point Likert survey distributed to various rotational molding organizations throughout the United States and the Association of Rotational Molders (ARM), a plastic manufacturing association with members in 58 countries worldwide. ARM (Association of Rotational Molders, 2021) supports research and development in the industry, working with various research institutions to remain on the cutting edge of development. Research is shared by making the findings of studies available to the members of ARM through educational materials, training opportunities, webinars, and seminars.

Background of the Study

Rotational molding, also called rotomolding or rotational casting, manufactures larger plastic products of various sizes and shapes that are seamless and stress-free with a hollow center. Manufacturers may use different materials, such as PVC, nylon, polypropylene, cross-linked polyethylene, metallocene polyethylene, and plastisol. According to Ratzlaff (2004), 80%-90% of all plastic used in the rotational molding industry is polyethylene due to ease of use and availability.

Plastic granules or pellets are ground into a fine polymer powder or resin mixed with pigment to make various colors. A pre-determined quantity of polymer powder or resin is poured into the bottom half of a metal mold attached to a large metal arm. The amount of powder required is determined by the thickness of a polymer piece to be produced. A vent tube is incorporated into the mold to release gases during the melting process and aid in cooling. The top of the mold or lid is moved into place with a hoist, secured with clips, and bolted with heavy-duty stainless-steel screws. The oven doors slowly open as the mold begins to rotate, and the arm revolves around the center turret into the oven, having been programmed by the machine operator electronically. The doors close, and the mold is heated to a temperature between 450 degrees Fahrenheit and 650 degrees Fahrenheit, depending on the polymer used, while biaxial rotation occurs (Ratzlaff, 2004).

According to D & M Plastics, Inc. (2017), the polymer coats the inside of the mold evenly as it melts during the slow rotation, less than 20 rotations per minute. The length of cook time varies from 8 minutes to 16 minutes (Ratzlaff, 2004), depending on the thickness of the plastic walls. Timing is critical in rotational molding. Plastic is affected negatively by overcooking a product, creating weak spots and discoloration. Plastic taken out of the oven too soon

will produce a product with bubbles and a rough, powdery inside surface.

Once the process is complete, the oven doors open, and the arm continues to rotate bi-axially and revolves around the turret, out of the oven, and into the cooling chamber. The cooling chamber consists of large fans and water misters used to cool the mold allowing the polymer to solidify to the desired shape and shrink slightly so that it can be handled by the operator and removed from the mold, according to D & M Plastics, Inc. (2017). During the cooling process, the machine operators pre-program the rotation and cooling time to prevent rapid cooling and warping of the polymer piece. The machine operators carefully extract the polymer piece from the mold by using impact guns to unscrew the stainless-steel bolts, carefully undo the heavy-duty clips, and use hydraulic lifts to remove the lid of the metal mold. According to machine operators at Dura-Cast Products (2019), a rotational molding manufacturing facility in Lake Wales, Florida, the machine operator then taps the polymer piece with a mallet to release it from the sides of the mold.

Across the rotomolding plastic industry, employee retention is a critical area of concern. Research gaps have been found specifically in the plastic industry and employee retention. Retention refers to the ability of management to retain employees (Nair, 2009). Employers put retention policies in place to entice employees to remain in the organization (Nair, 2009). Hale (1998) showed that attracting and retaining the best employees represented a severe problem for organizations. Employee turnover is one of the costliest and most intractable challenges confronting organizations globally (Heyman, 2008). According to Hale's (1998) study, 86% of employers found attracting new employees challenging, and 58% found retaining employees difficult. In a survey completed by the North American Plastics Industry in 2014, the turnover

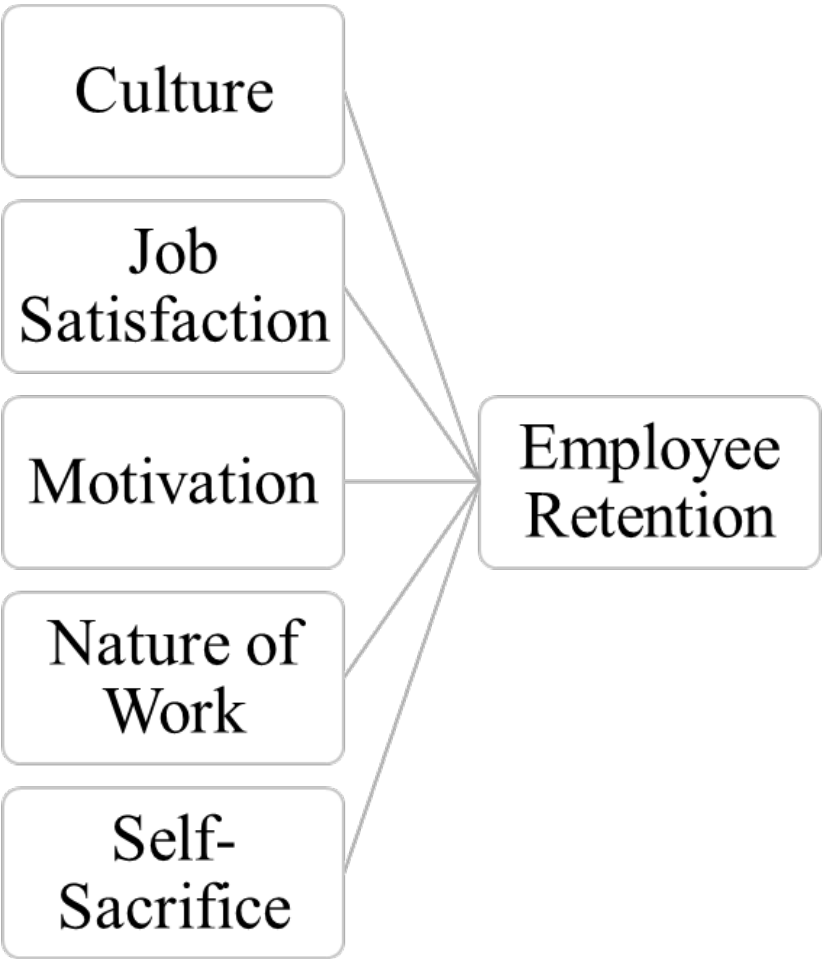
rate was 22.8%, due to increased wages, a greater use of automation, and a housing market that was slow to recover, limiting the mobility of employees (Nix, 2014).

Conceptual Framework

This research study examined employee culture, job satisfaction, motivation, nature of work, and self-sacrifice as factors that contribute to employee retention in the rotational molding plastic manufacturing industry, as depicted in Figure 1. The 5-point Likert survey was used as an instrument to determine which of the factors had the greatest impact on employee retention.

Figure 1

Factors Affecting Employee Retention



Theoretical Foundation

Herzberg's (1966) motivation-hygiene theory indicates that employees are motivated by certain workplace factors that lead to job satisfaction or prevent dissatisfaction. Herzberg breaks down the motivating factors into two categories, motivational factors and hygiene factors. Motivational factors include a sense of achievement, growth opportunities, recognition, responsibility, and meaningfulness of work. Hygiene factors include fringe benefits, job security, physical working conditions, status, and pay.

Problem Statement

Organizational leaders are finding employee retention to be a critical area of concern in the rotational molding plastic industry due to disruption of manufacturing, increased costs to train new hires, and decreased morale throughout the organization.

Purpose Statement

The purpose of this study was to determine which of the five factors of culture, job satisfaction, motivation, nature of work, and self-sacrifice affect employee retention in rotational molding plastic manufacturing.

Overview of Methodology

Research Design

A quantitative approach is suitable when the objective is to measure a particular phenomenon or understand the relationship between variables (Saunders et al., 2016). Primary data collection methods were used in the research to determine the factors that affect employee retention in the rotational molding plastic industry. The study's research design was considered non-experimental and quantitative (Kennedy & Edmonds, 2017). A survey research methodological approach was used to specifically achieve the data necessary to address the

study's research questions and hypotheses. Survey research was selected for its benefit of acquiring considerable amounts of data on a given topic and for statistical power purposes.

Sample Selection

After receiving approval from the Institutional Review Board, the researcher identified machine operators and finishers in various rotational molding organizations in the United States. Individuals were given and asked to sign a letter of informed consent describing the confidentiality of the study (see Appendix A). A Likert survey was employed to gather information from machine operators and product finishers in the rotational molding plastic industry (see Appendix B). The researcher offered individuals the option of accessing the survey through a QR code that led to the online survey written in English and Spanish. Voluntary participation in the quantitative paper survey was sent through company email for machine operators and finishers written in English and Spanish. Data were collected during work hours through a 30-question survey administered in small groups by the human resource (HR) department.

The use of an online survey, adapted from previously existing quantitative studies, was suitable as it was less time-consuming and more cost-effective. It enabled simultaneous data collection from multiple respondents. The online method collected quantitative responses by distributing the Likert survey through ARM. ARM is a worldwide trade association currently representing member companies in 58 countries. Members include rotationally molded plastic product manufacturers, industry suppliers, designers, and professionals. ARM is the primary voice of the industry and the source of information on rotational molding. ARM serves its members by focusing on the needs of designers, customers, educators, suppliers, member company employees, and regulators. ARM supports research and development; research projects

are sponsored through several highly regarded institutions with top-notch facilities and staff. Research findings are passed on to members, putting them on the cutting edge of technology. ARM offers various educational opportunities, including training manuals, videos, and seminars.

Response Rate

The researcher contacted 30 rotational molding organizations in the United States directly and distributed the online survey through ARM. As a result, 210 individuals returned the survey with complete data, yielding a response rate of 98%. The participants' privacy, anonymity, and confidentiality were ensured and honored through the process.

Research Questions

This study addressed the following research questions:

1. To what degree did study participants express their willingness to remain in their current jobs within the plastics manufacturing industry?
2. Considering the dimensions of employee motivation, self-sacrifice, organizational culture, job satisfaction, and nature of work in the organization, which dimension was most associated with and predictive of study participants' willingness to remain in their current jobs within the plastics manufacturing industry?
3. Considering the two broad dimensions of motivational factors and hygiene factors, which was most associated with and predictive of study participants' willingness to remain in their current jobs within the plastics manufacturing industry?

Research Hypotheses

1. To what degree did study participants express their willingness to remain in their current jobs within the plastics manufacturing industry?

H_a: There will be a statistically significant response by study participants for perceptions of job retention within the rotational molding plastic industry.

Considering the statistically significant summary response by study participants for job retention within the plastics industry, the alternative hypothesis in Research Question 1 was retained.

2. Considering the dimensions of employee motivation, self-sacrifice, organizational culture, job satisfaction, and nature of work in the organization, which dimension was most associated with and predictive of study participants' willingness to remain in their current jobs within the plastics manufacturing industry?

H_a: The dimension of job satisfaction will represent the most robust, statistically significant correlate and predictor of study participant perceptions of remaining in their positions and not seeking another job. Considering the superior associative and predictive effect for the dimension of job satisfaction, the alternative hypothesis in Research Question 2 was retained.

3. Considering the two broad dimensions of motivational factors and hygiene factors, which was most associated with and predictive of study participants' willingness to remain in their current jobs within the plastics manufacturing industry?

H_a: Motivator factors will exert the greatest associative and predictive effect for employee job retention. Considering the superior associative and predictive effect for motivator factors, the alternative hypothesis in Research Question 3 was retained.

Overview of Analyses

The Statistical Package for Social Sciences (SPSS) was used in the research study to analyze data. The software is scalable, flexible, and customized to meet the desired needs. SPSS

improved the efficiency of handling the quantitative data collected from various rotational molding plastic manufacturing facilities. The data analyzed focused on employee retention related to the multi-factorial categories of culture, job satisfaction, motivation, nature of work, and self-sacrifice to give a deeper understanding of employee retention in the rotational plastic manufacturing industry.

Preliminary Analyses

The study's three research questions and hypotheses were addressed using descriptive, inferential, and associative/predictive statistical techniques. The probability level of $p \leq .05$ was selected as the study's threshold value for findings to be considered statistically significant. Numeric effect sizes achieved in the study's analyses associated with the research questions and hypotheses were interpreted using the conventions of effect size interpretation proposed by Sawilowsky (2009).

Data Analysis by Research Questions

In Research Question 1, the one-sample t test was used to evaluate the statistical significance of study participants' mean score response to perceptions of remaining in their positions within the plastics industry. The assumption of data normality was assessed through the dependent variable's skew and kurtosis values using the conventions of interpretation proposed by George and Mallery (2019).

In Research Question 2, the multiple linear regression (MLR) statistical technique was used to assess the predictive ability of the respective model's independent variables. The assumptions associated with the use of MLR were addressed by statistical means (i.e., independence of error, normality of residuals, multicollinearity, and influential outliers) and visual inspection (i.e., linearity and homoscedasticity).

In Research Question 3, the MLR statistical technique was used to assess the predictive ability of the respective model's independent variables. The assumptions associated with the use of MLR were addressed by statistical means (i.e., independence of error, normality of residuals, multicollinearity, and influential outliers) and visual inspection (i.e., linearity and homoscedasticity).

Limitations

Finding prior studies specific to employee retention in rotational plastic manufacturing proved to be limiting. The narrow perspective had to be broadened initially to a more generalized topic of study focusing on the individual critical factors in isolation: culture, job satisfaction, motivation, nature of work, and self-sacrifice. The data collected stemmed from five previously used surveys conducted in other scientific studies. Five survey questions were explicitly chosen from each general survey to measure culture and employee retention, job satisfaction and employee retention, motivation and employee retention, nature of work and employee retention, and self-sacrifice and employee retention.

Definition of Key Terms

The following words and phrases are key terms for the study.

- **mold:** A tool in which plastic powder is placed and heat is used to form a part conforming to the shape of the mold.
- **rotational molding:** A process used to mold hollow parts. The material is placed in a mold cavity that rotates in two axes. The mold is subjected to heating and then cooling while rotating. The material melts and adheres to the cavity walls to form the desired shape; called rotomolding or rotational casting.

Significance

The Bureau of Labor Statistics (2019) has estimated that it costs about 33% of a recruit's salary to replace a lost employee. On average, it costs employers \$11,000 in direct training expenses and lost productivity to replace an experienced employee making \$33,000. The private industry estimates that highly skilled jobs experience turnover losses at a much higher level, up to 150% of the position's annual salary. High employee turnover rate in plastic manufacturing impacts all stakeholders. The loss of a trained and experienced workforce means unskilled individuals in each department are expected to complete tasks without the confidence that years of on-the-job training would establish. Rotational molding requires skilled individuals to work as machine operators and finishers. The Bureau of Labor Statistics (2020) has stated that HR departments within the plastic industry are continually searching for qualified individuals to fill positions, retain employees, and decrease the financial and time invested in the constant turnover of a new labor workforce.

II. REVIEW OF LITERATURE

The purpose of this study was to determine which of five factors, culture, job satisfaction, motivation, nature of work, and self-sacrifice, affect employee retention in rotational molding plastic manufacturing. The findings of this study were intended to assist rotational molding organizational leaders in identifying the factors that affect the retention of molders and finishers.

Employee Retention

The challenge for most organizations today centers on formulating effective employee retention strategies that will enable organizations to retain employees they consider critical to attaining organizational goals, in addition to the high financial cost of losing an employee (Chiboiwa et al., 2010). Mitrovska and Eftimov (2016) studied the financial cost by modifying software previously created by Cornell University. The researchers first interviewed employees, then calculated the financial impact and divided them into cost categories.

Mitrovska and Eftimov (2016) examined the cost of an employee, noting the hourly wages and hours worked. The second category measured separation costs, taking into consideration the administrative procedures conducted to check out the employee, processes completed to remove the employee from payroll, and exit interviews concluded. The third category measured recruitment costs to fill vacancies based on external employment agencies and administrative procedures such as writing a job description, advertisement, attendance at career days, and job fairs. The fourth category represented the cost of recruited candidates,

including administrative costs incurred to schedule and interview individuals, conduct background and reference checks, and drug screenings; in some instances, employers paid for travel, food, and accommodations. The fifth category was a cost incurred after hire to train the new employee, informally on the job site or formally by an external trainer, which included materials and location fees. The final cost to an organization was based on reduced productivity, errors and defects of a product, and lost production time due to an untrained new employee lacking experience. Mitrovska and Eftimov concluded that a decrease in employee retention affected organizations not only through increased financial costs but also affected employee morale and was disruptive to organizational culture, structure, and productivity.

Subramaniam et al. (2019) designed a study that investigated the factors that made employees want to stay in manufacturing jobs. The researchers surveyed 130 employees in a semiconductor manufacturing facility in Malaysia using questionnaires that demonstrated sufficient validity and reliability, according to the parameter estimates and statistical significance. Three organizational factors, performance management, reward and recognition, and hiring and promotion practices, were examined to determine the effect on employee retention. Reward and recognition were found to be the most significant predictor of employee retention ($\beta = .327, p < .01$), followed by performance management ($\beta = .204, p < .05$); no significant relationship was found for hiring and promotion ($\beta = .138, p < .05$). The findings demonstrated that rewards and recognition and performance management significantly influenced employee retention. It was determined from the study that hiring and promotion practices did not predict employee retention.

Mohan (2019) stated that retention was essential and that the most valuable asset of any organization was its employees. The purpose of the study was to identify factors that influenced

employee retention. A quantitative Likert scale survey instrument was distributed to 50 HR professionals in the hotel industry located in Tamilnadu. The data were collected and analyzed using mean score analysis to identify the factors that influenced employee retention and multiple regression analysis to find the impact of each individual factor on employee retention. In the study by Mohan (2019), results revealed that a unit increase in employee empowerment led to a 0.156 increase in employee retention, a unit increase in employee training and development programs led to a 0.412 increase in employee retention, a unit increase in performance appraisal led to a 0.171 increase in employee retention, a unit increase in compensation plans led to a 0.345 increase in employee retention, and a unit increase in the working environment led to a 0.078 increase in employee retention. The researcher concluded that employee empowerment, employee training and development programs, performance appraisal, compensation plans, and working environments had a significant impact on employee retention.

The researchers Panday and Kaur (2022) studied different talent management practices used for technical employees of the manufacturing units located in the Uttarakhand industrial sector. Large companies were surveyed, and data were collected from 384 technical employees to find the factors that influenced employee retention. The questionnaire focused on talent identification and planning, talent acquisition, talent learning and planning, leadership and career development, performance management, employee engagement, reward, and recognition. Talent management was the most prominent feature that positively influenced employee retention, according to the results of the study. Panday and Kaur (2022) stated that the success of any organization depends on the quality of its human capital.

Herzberg Motivation Hygiene Theory

Herzberg (1966) surveyed 200 accountants and engineers and derived the initial framework for his motivation-hygiene theory, also known as the two-factor theory, which indicated that employees were motivated by certain workplace factors that lead to satisfaction and dissatisfaction that were not to be measured on the same scale. Herzberg broke down the motivating factors into two categories: motivational and hygiene factors. Motivational factors included a sense of achievement, growth opportunities, recognition, responsibility, and meaningfulness of work. Hygiene factors included fringe benefits, job security, physical working conditions, status, and pay. Herzberg assumed that employees could be retained by reducing dissatisfaction and maximizing satisfaction.

Motivational Factors

The first part of Herzberg's (1966) theory stated that certain motivational factors related to the job content and provided satisfying experiences for employees. These motivational factors were also known as satisfiers and included achievement, recognition, work, responsibility, advancement, and growth (Almaaitah et al., 2017). Satisfaction (and motivation) would occur only as a result of the use of motivators. Herzberg argued that for an employee to be truly motivated, the employee's job had to be fully enriched where the employee had the opportunity for achievement and recognition, stimulation, responsibility, and advancement (Almaaitah et al., 2017).

Hygiene Factors

The second part of Herzberg's (1966) theory stated that hygiene factors that were not job-related factors caused dissatisfying experiences for employees. The factors were known as hygiene factors or dissatisfiers, which included company policies, salary, co-worker

relationships, and style of supervision. However, removing the causes of dissatisfaction did not result in a state of satisfaction. Instead, it resulted in a neutral state (Herzberg, 1966). Managers who sought to eliminate factors that created job dissatisfaction potentially brought about peace, but not necessarily motivation. The workforce was placated rather than motivated.

Contributing Factors

This research study examined employee culture, job satisfaction, motivation, nature of work, and self-sacrifice as factors contributing to employee retention in the rotational molding plastic manufacturing industry.

Culture

Organizational behavior researchers Memili and Barnett (2008) identified organizational values, assessed characteristics of organizations, assessed individual preferences, and calculated the person-organization fit score. The findings of the study revealed that individuals selected occupations that were similar to or fit with a person's self-concept, which indicated a high likelihood of the individuals staying in their jobs. Memili and Barnett concluded that individuals were attracted to an organization's culture and value system that was consistent with theirs, having a positive effect on employee retention.

Delle and Kumasey (2013) used a predictive correlational research design to investigate the relationship between various dimensions of organizational culture and employee retention. A questionnaire was completed by 301 employees at four different banks in Ghana. The study's outcome stated that organizational culture had a significant and positive effect on employee retention. Community culture, defined by Delle and Kumasey as supervisor support and a good work environment that created an important social and mental bond between employees and the organization, was found to have a significant effect on employee retention. An innovative

culture, an organization that encourages risk-taking, creativity, and entrepreneurial spirit, was found to have a significant impact on employee retention. Bureaucratic culture, defined as an organization that adheres to policy and procedures, was found to have a significant effect on employee retention.

A quantitative design study conducted by Remijus et al. (2019) used stratified random sampling of 293 individuals employed by commercial banks in Nigeria to examine the influence of organizational culture on job satisfaction and workers' retention in the banking sector. Primary data were collected through a questionnaire and interviews; secondary data were obtained from banks' records and the internet. Questionnaires were distributed to 293 top, middle, and lower levels of management and junior workers; 250 questionnaires were completed and returned with a response rate of 85%. A chi-square test, $p < .05$ level of significance, was used to test the hypotheses. The researchers concluded that there was a significant positive relationship between organizational culture and worker retention in the banking sector. The study further revealed that team orientation culture positively influenced job satisfaction in the banks included in the study. Therefore, organizational culture has played a major role in the banking sector as a way of enhancing employees' job satisfaction and workers' retention.

O'Reilly et al. (1991) developed the Organizational Culture Profile to investigate person-culture fit. Five separate groups were used to create the Organizational Culture Profile. The first group consisted of Master of Business Administration students who participated in the development of individual organizational values and the relationship between personality and preferences for organizational cultures. The second group of Master of Business Administration students provided data on individual cultural preferences. The third group of individuals participated in a longitudinal study conducted over two years in eight public accounting firms,

which surveyed individuals upon hire, at 12 months, and at 24 months. Correlations were found between person-organization fit and normative commitment, $r = .25, p < .01$; overall job satisfaction, $r = -.37, p < .01$; and intent to leave an organization, $r = -.37, p < .01$. Results suggested a high person-organization fit initially measured upon an employee entering the firm was associated with a high positive affect and low intent to leave at 12 months and 24 months.

Habib et al. (2014) studied the impact of organizational culture on job satisfaction, employees' commitment, and the retention of employees in the organization. A sample of 235 employees from different organizations (i.e., MCB Bank, U Micro Finance Bank, Sugar Mill, Thermal Power Plant, and National Rural Support Programme) in Pakistan was surveyed using a questionnaire. Data were collected, and a correlation analysis test was applied, which indicated cultural innovation and risk-taking led to improved employees' commitment, job satisfaction, and employee retention rates.

Job Satisfaction

According to a study conducted in Thailand by researchers Jarupathirun and De Gennaro (2018), job satisfaction directly affects employee retention. Older employees who have remained at a company for an extended period tend to exhibit a higher sense of job satisfaction, affecting employee retention. Employees who saw themselves as part of the organization and felt they added value remained due to job satisfaction (Kontoghiorghes, 2016).

In a study conducted by Moore et al. (2020) at 12 dairy farms in the northeast United States, job satisfaction was profoundly affected by the relationship employees had with their supervisors. Employees who had a good relationship with their employer and understood goals, directions, and how their work fit into accomplishing those goals were more likely to be satisfied

with their jobs. Stone et al. (2009) stated employees who felt their supervisors heard them and that their input was valued tended to remain on the job longer.

A case study was conducted, and a questionnaire was distributed by Osibanjo et al. (2014) to 156 faculty members of a Nigerian private university with a 70% return rate. The researchers believed that compensation was strategic to the goals of any organization and ensured employee retention, satisfaction, and development, as well as better performance of the employees. Data collected revealed a significant relationship between salaries, incentives, and bonuses and how they positively affected performance. Osibanjo et al. concluded that there was a link between compensation/benefit packages, satisfaction levels, and employee retention.

Michael et al. (2016) further studied compensation packages and their impact on employee retention with a simple random sampling of 71 employees. The primary data were collected through questionnaires and personal interviews. Data analyses were performed with the help of mean, standard deviation, correlation, and chi-square analysis. Results showed a significant relationship between compensation packages and employee retention, as well as a positive correlation between a compensation package and job satisfaction. The researchers' findings showed that effective compensation packages led to job satisfaction and employee retention.

Yadav et al. (2020) surveyed 401 individuals over a period of 7 months in different sectors of India (i.e., construction, banking, information technology, and fast-moving consumer goods). Confirmatory factor analysis was conducted for factors influencing retention, and the model fit indices were assessed for an acceptable measurement model. The purpose of the study was to find factors that affected employee retention. Data collected and analyzed by the researchers found that job satisfaction was the primary factor affecting employee retention.

Motivation

Nnabuife (2009) defined motivation as the internal or external driving force that produces the willingness to perform an act to a conclusive end. Individuals who clearly understand an organization's values, vision, and mission are motivated to work harder for a common goal and put forth their best efforts to accomplish an organization's objectives when motivated (Chukwuma & Okafor, 2014). Kurt Lewin was among the philosophers who developed the concept of human motivation. In his social psychology theory, the philosopher held that an individual's interactions with the environment influenced an individual's behavior (Maslow, 1954). People embraced acts that attracted rewards and avoided those that led to suffering or punishments. Thus, employees in the manufacturing industry were motivated to undertake actions that resulted in awards and recognition. However, David McClelland (1985) indicated that people were driven by achievement, power, and affiliation to achieve higher goals. Thus, some workers in the manufacturing industry may be intrinsically driven by their work objectives to achieve higher goals.

Pittino and Visintin (2016) conducted a quantitative study of manufacturing organizations in Austria and Hungary. The researchers concluded that employees stayed with organizations in an environment that was motivating and encouraging, and the rewards employees received had great importance in satisfying their aspirations and needs.

In Pakistan, employees working in public sector oil and gas organizations were targeted to analyze the relationship between compensation, motivation, and employee retention by Sarmad et al. (2016). The empirical quantitative research study was used to survey 140 employees. Complete cross-sectional data through questionnaires from 112 individuals were returned, yielding a response rate of 80%. Data were analyzed using the statistical technique of

multiple regression and concluded that there was a significant correlation between compensation and employee retention ($\beta = .22$) and a significant correlation between motivation and employee retention ($\beta = .47$). Compensation was measured with a reliability of .73, motivation was measured with a reliability of .79, and employee retention was measured with a reliability of .81. The study showed that employee retention was significantly affected by motivation and compensation in Pakistan's public sector oil and gas organizations.

Researchers Chukwuma and Okafor (2014) conducted a quantitative study to survey 400 management, senior, and junior staff members in manufacturing organizations in Nnewi to determine whether workers were motivated and how motivation affected their job performance with a return rate of 100%. The Friedman test was used to analyze the first hypotheses resulting in 2419.647, $p < .05$, which concluded that the motivational techniques adopted by manufacturing firms do not significantly lead to retention of the employees in Nnewi. Chukwuma and Okafor used the Friedman test to analyze the second hypothesis, which resulted in 2419.647, $p < .05$; therefore, the employees had significantly responded to the motivational techniques adopted by the company. The Friedman test was used to analyze the third hypothesis resulting in 468.507, $p < .05$; there were significant factors hindering employee motivation in the company. Finally, the Friedman test was used to analyze the fourth hypothesis resulting in 281.042, $p < .05$; the motivation strategy given to the employees significantly led to higher performance and productivity. The researchers concluded from their study that the effect of motivation on employee productivity is of paramount importance to the organization (Chukwuma & Okafor, 2014).

A study in Nigeria by Ijah (2013) investigated how well an organization motivated its workers (intrinsically and extrinsically) to achieve the mission and vision and increase

productivity. Cluster sampling was used to select an equal number of manufacturing organizations. Purposive sampling was used to study only manufacturing firms in the Nnewi area of Anambra State. A questionnaire was distributed to 63 individuals from 21 manufacturing organizations after a pilot study was carried out, and it was found to be reliable. The Pearson moment coefficient correlation ($r > t_v$) showed $.42 > .197$, a significant result. The study revealed that extrinsic motivation given to workers in an organization significantly influenced the workers' performance.

Nature of Work

Machine operators in the rotomolding industry are often hired, attend an orientation, and are trained on the job by a lead operator. Individuals require strength and stamina to work in environmental conditions with increased temperatures due to the extreme heat needed for rotational molding. In May 2019, the Occupational Employment Statistics Survey, completed by the Bureau of Labor Statistics, United States Department of Labor, researched the national industry-specific occupational employment and wage estimates. Data showed that the average plastic machine operator in the United States of America earned an hourly wage of \$14.43 (Bureau of Labor Statistics, 2019). Rotational molding is a labor-intensive business often facing a looming shortage of qualified workers due to demographics, widespread economic opportunity, and an educational system that demeans technical careers. Machine operators are susceptible to repetitive tasks typically borne by manual labor, such as heavy lifting, part handling, and screwing in mold inserts. Rotomolding machines require operators who understand the rotomolding process and are committed to achieving quality and efficiency levels in the industry.

Retaining human resources within an organization was the purpose of a study designed by Pandu and Sankar (2019). The researchers surveyed 250 employees from manufacturing firms

in Tamil Nadu and Puducherry, India, to find the relationship between factors influencing employee retention. Pearson correlation was used to analyze data from the quantitative study as well as multiple regression analysis. They found that factors such as improper and unfavorable organizational policies, poor workplace relationships, extended work schedules, and inappropriate pay benefits have a negative effect on employee retention.

The quantitative study by Idowu (2020) examined the role of flexible working hours on employee job performance and employee retention in manufacturing organizations in Agbara, State of Ogun, Nigeria. Purposive sampling was used to collect survey data from 227 employees working in five manufacturing organizations with a return rate of 90%. The data were analyzed using linear regression and Pearson correlation. Cronbach's alpha coefficients were reported as $\alpha = .82$ for the flexible working hours scale, $\alpha = .84$ for the employee performance scale, $\alpha = .79$ for the employee retention scale, and $\alpha = .88$ for the employee work stress scale. The Pearson correlation analysis showed a significant relationship between flexible working hours and employee work stress, $r = .956$, $p < .01$, $n = 227$. The study found that flexible work hours improved employee performance, increased retention of employees, and reduced employee work stress.

Benton (2016) aimed to examine the retention of qualified, competent staff in child welfare agencies due to the stressful nature of the work. The researcher conducted a mixed-methods study with 1,102 valid surveys completed by child welfare workers that examined burnout, job stress, and job satisfaction as factors that affected employee retention. Research showed that although the job was high pressure, administrators who helped child welfare workers manage burnout and stress stayed on the job longer for increased employee retention. The study also found that every extra weekly hour worked by child welfare workers had a

negative effect on employee retention.

Self-Sacrifice

Some employees in plastic manufacturing firms were intrinsically motivated to achieve their organization's goals. These employees enjoyed their work and were willing to work for extended hours if the customers and other supply chain stakeholders were satisfied. Employees with working willpower were highly motivated in the industry. However, those who were not self-driven needed close supervision, as they were demoralized. In manufacturing firms, employees sacrificed their time, skills, and energy to meet the stakeholders' demands as long as the management acknowledged their efforts.

Retaining employees was the focus of a qualitative study conducted in rural Zimbabwe. Gomba (2015) determined that employees who remained on the job for 10 years or more felt supported by leaders who showed self-sacrificial leadership. Ruggieri and Abbate (2013) found that self-sacrificial leaders tended to sacrifice personal gains, privileges, or enrichment for the betterment of the organization. The leaders used personal time to complete tasks and their resources for the improvement of the organization. Employees tended to rate self-sacrificial leaders as compelling, legitimate, and charismatic. Interview results from the study concluded that supervisors who modeled a self-sacrificial leadership style resulted in employees who imitated self-sacrificial characteristics and remained on the job longer.

Umamaheswari and Krishnan (2016) studied employee retention in ceramic sanitary ware factories in India; five factories with 150 employees per location allowed for robust participation. Questionnaires were distributed to 550 individuals, and 416 were returned with a response rate of 75% by individuals in production, marketing, finance, and HR. Researchers used MLR to analyze the data, stating that two proposed factors, work-life balance and supervisor support,

were significant predictors of organizational commitment and employee retention. Based on the results, the researchers recommended that supervisors spend time on the production floor regularly to develop relationships with the employees, show them that the organization cares for their well-being, and appreciates the sacrifice they make to do what is best for the organization.

Kossivi et al. (2016) acknowledged the need to review the literature of other employee retention studies. The researchers called employees the “lifeblood” of an organization knowing the value they added to any organization. The study found that many individuals were looking for flexible schedules or reduced work weeks to find a balance between personal and professional lives. Employees must determine the amount of sacrifice the individual is ready to make at the expense of other areas of life. Leners et al. (2006) stated that employers were encouraged to implement a “harmonious” balance to improve retention. A direct relation was observed by Mita et al. (2014) between employees’ decisions to stay and how much they are willing to sacrifice for a work-life balance.

Ghani et al. (2022) collected and synthesized 163 studies between 2010 and 2021 on employee retention in the hospitality industry. A large number of the studies focused on internal factors affecting retention, but a few studies considered external factors. The study aimed to identify the causes and challenges of employees leaving their jobs and propose effective employee retention strategies that management can use to keep their employees. According to the studies compiled, the researchers found that employees who developed a schedule to allow them to take a casual leave when required to attend to their obligations were likelier to have employees who remained on the job. The research suggested that businesses that were operational 24 hours a day and on weekends and holidays retained their employees when a shift arrangement was implemented. Employees made sacrifices when they felt their managers were understanding of

their situations and worked with them to find a solution.

Summary

This chapter presented studies of literature on employee retention using Herzberg's motivation theory, also known as a two-factor theory, as a framework for the literature review. Herzberg stated that certain motivating factors related to the job content provided satisfying experiences for employees. These motivational factors were also known as satisfiers. Herzberg's theory indicated that hygiene factors that were not job-related caused dissatisfying experiences for employees. Removing the causes of dissatisfaction did not result in a state of satisfaction. Instead, it resulted in a neutral state (Herzberg, 1966).

Finding prior studies on employee retention in rotational plastic manufacturing proved unsuccessful. The narrow perspective had to be broadened to a more generalized study focusing on the individual critical factors in isolation: culture, job satisfaction, motivation, nature of work, and self-sacrifice.

III. METHODOLOGY

The purpose of this study was to determine which of the five factors, culture, job satisfaction, motivation, nature of work, and self-sacrifice, affect employee retention in rotational molding plastic manufacturing. The findings of this study are intended to assist rotational molding organizational leaders in identifying the factors that affect the retention of molders and finishers.

Description of Methodology

The study's research design was considered non-experimental and quantitative. (Kennedy & Edmonds, 2017). A survey research methodological approach was used to achieve the data necessary to address the study's research questions and hypotheses. Survey research was selected for its benefit of acquiring considerable amounts of data on a given topic and for statistical power purposes.

Participants

Study participants were identified as production workers in various rotational molding organizations in the United States and members of ARM. ARM is a worldwide trade association currently representing member companies in 58 countries. Study participants were defined as machine operators and finishers of rotationally molded plastic products. A sample size of at least 200 participants was sought at the outset of the study.

Instrument

The study's research instrument represented an adaptation of the work of Frederick Herzberg (Shujahat et al., 2018). The broad dimensions of Herzberg's hygiene factors and motivational factors were used to guide the development of the study's survey items in the first phase of research instrument construction, the content validity judgment phase (Boateng et al., 2018). Moreover, five specific categories within Herzberg's broad dimensions were selected for use in the creation of survey items specific to the study's topic. The five specific categories reflected in the survey items represented on the study's research instrument were self-sacrifice, nature of work, motivation, culture, and job satisfaction.

Validity of Likert-Type Survey

A 5-point Likert-type scale (5 = *strongly agree*, 4 = *agree*, 3 = *uncertain*, 2 = *disagree*, and 1 = *strongly disagree*) represented the fixed-choice structure of the study's research instrument. Twenty-six Likert-type survey items reflected the five categories within Herzberg's broad dimensions, with four additional survey items associated with the construct of employee retention, the study's dependent variable.

The study's research instrument was administered to a small group of the study's potential participant sample to pilot the survey in the second phase of the instrument validation process. A Cronbach's alpha value of at least .70 was sought at the outset of the study. The alpha level achieved with the pilot study group of 30 participants was excellent, exceeding .90. The final administration with the study's total sample of participants was validated using Cronbach's alpha statistical technique in the third phase of the validation process. A final administration alpha level of at least .80 was sought for research instrument validation purposes.

Reliability of Likert-Type Survey

Statistical power analysis using the G*Power software (3.1.9.2, Universität Düsseldorf, Germany) was conducted in advance of the study for sample size estimates associated with statistical significance testing. The study's statistical power analysis was delimited to anticipated medium and large effects, a power ($1 - \beta$) index of .80, and a probability level of .05.

Research Question 1 featured the use of the one-sample t test. A sample size range of 12 (anticipated large effect $d = .80$) to 27 (anticipated medium effect $d = .50$) was sufficient to detect a statistically significant finding ($p \leq .05$). In Research Questions 2 and 3, the MLR statistical technique was used for predictive and statistical significance testing purposes. An anticipated medium effect ($f^2 = .15$) would require 68 (2 predictors) to 92 (5 predictors) participants to detect a statistically significant finding. An anticipated large effect ($f^2 = .35$) would require 31 (2 predictors) to 43 (5 predictors) participants to detect a statistically significant finding.

Procedures

Primary data collection methods were used in the study to determine the factors that affect employee retention in the rotational molding plastic industry. After approval from the Institutional Review Board, individuals were asked to sign a Letter of Informed Consent form in English and Spanish (see Appendix A) describing the study's confidentiality and giving the researcher approval to use the data collected. A Likert-type survey instrument (see Appendix B) was employed to gather information from machine operators and product finishers in the rotational molding plastic industry. A survey adapted from previously existing quantitative studies was considered suitable as it was less time-consuming, cost-effective, and enabled simultaneous data collection from multiple respondents. The online and paper methods were

used to collect quantitative responses by distributing the Likert-type survey through ARM and to individual rotomolders.

ARM (2021) is a worldwide trade association currently representing member companies in 58 countries. Members include rotationally molded plastic product manufacturers, industry suppliers, designers, and professionals. ARM is the primary voice of the industry and the source of information on rotational molding. ARM serves its members by focusing on the needs of designers, customers, educators, suppliers, member company employees, and regulators. ARM supports research and development; research projects are sponsored by highly regarded institutions with top-notch facilities and staff. Research findings within the industry are typically disseminated to organizational members, thereby fostering the cutting edge of technology. ARM offers various educational opportunities, including training manuals, videos, and seminars.

The researcher contacted 30 rotational molding organizations in the United States directly to distribute the survey within their organizations. HR directors and operations managers arranged for their machine operators and finishers to complete the survey. Data were collected during work hours through survey instrument administration conducted in small groups. Surveys were distributed and returned with complete data, yielding a response rate of 98%. The participants' privacy, anonymity, and confidentiality were ensured and honored through the process.

Data Analysis

Study data were analyzed at the preliminary, foundational level ahead of the formal analysis of data associated with the study's research questions. Descriptive statistical techniques were used to assess the study's demographic information. The study's demographic information of participant gender, age, and years of experience were specifically addressed using the

descriptive statistical techniques of frequencies and percentages. Descriptive statistical methods were used to assess the study's response set data by the five dimensions identified for study purposes. The study's response set data for the five dimensions were addressed using frequencies, measures of central tendency (mean scores), variability (minimum/maximum and standard deviations), standard errors of the mean (*SEM*), and data normality (skew and kurtosis).

The study's extent of missing data was assessed using frequencies and percentages. The internal reliability of study participant response to survey items represented on the study's research instrument was evaluated using Cronbach's alpha test statistic (Field, 2018). The conventions of alpha interpretation proposed by George and Mallery (2019) were applied to alpha values achieved in the study.

Preliminary Analysis

The study's three research questions and hypotheses were addressed using descriptive, inferential, and associative/predictive statistical techniques. The probability level of $p \leq .05$ was selected as the study's threshold value for findings to be considered statistically significant. Numeric effect sizes achieved in the study's analyses associated with the research questions and hypotheses were interpreted using the conventions of effect size interpretation proposed by Sawilowsky (2009).

Research Question 1

In Research Question 1, the one-sample *t* test was used to evaluate the statistical significance of study participants' mean score response to perceptions of remaining in their positions within the plastics industry. The assumption of data normality was assessed through the dependent variable's skew and kurtosis values using the conventions of interpretation proposed by George and Mallery (2019).

Research Question 2

In Research Question 2, the MLR statistical technique was used to assess the predictive ability of the respective model's independent variables. The assumptions associated with the use of MLR were addressed by statistical means (independence of error, normality of residuals, multicollinearity, and influential outliers) and visual inspection (linearity and homoscedasticity).

Research Question 3

In Research Question 3, the MLR statistical technique was used to assess the predictive ability of the respective model's independent variables. The assumptions associated with the use of MLR were addressed by statistical means (independence of error, normality of residuals, multicollinearity, and influential outliers) and visual inspection (linearity and homoscedasticity).

Summary

This non-experimental, quantitative study examined employee retention in rotational molding organizations by surveying machine operators and finishers in the industry. The researcher distributed a 30-question Likert survey in English and Spanish in rotational molding organizations across the United States to determine the factors that contribute to employee retention. The information gathered from 210 surveys collected will assist employers as they make informed decisions and design ways to retain employees.

IV. RESULTS

The purpose of the study was to evaluate the associative and predictive effect that the five dimensions of job satisfaction, culture, nature of work, motivation, and self-sacrifice exerted upon employee retention in rotational molding plastic manufacturing. A quantitative, non-experimental research design was used to address the study's topic. The specific research methodology used in the study was a survey research approach. The study's sample of participants was accessed through a non-probability, convenient/purposive approach. Descriptive, inferential, and associative/predictive statistical techniques were used to analyze study data. The analysis of data and reporting of study findings were conducted using the 28th version of IBM's SPSS.

The following represents the reporting of findings achieved in the study by preliminary descriptive statistical analyses and the analysis of data associated with the three research questions and hypotheses stated in the study.

Methods of Data Collection

The online and paper methods were used to collect quantitative responses by distributing the Likert-type survey through ARM and to individual plastic rotational molding organizations. The researcher contacted 30 rotational molding organizations in the United States directly to distribute the survey within their organizations. HR directors and operations managers arranged for their machine operators and finishers to complete the survey. Data were collected during

work hours through survey instrument administration conducted in small groups.

Data Analysis by Research Question

Analyses were conducted prior to the analysis of the study's three research questions. The analyses, foundational in nature and scope, focused upon the study's demography, missing data/completion rate, and the internal reliability of study participant response to survey items.

Descriptive Statistics: Demography

Descriptive statistical techniques were used to assess the study's primary demographic identifying information. The study's demographic information of study participants' gender, age, and years of experience were more specifically addressed using the descriptive statistical techniques of frequencies and percentages.

Table 1 contains a summary of finding for the descriptive statistical analysis of the study's demographic identifying information.

Table 1*Descriptive Statistics Summary: Demographic Identifying Information*

Variable	<i>n</i>	%	Cumulative %
Gender			
Female	37	17.62	17.62
Male	171	81.43	99.05
Missing	2	0.95	100.00
Age (in years)			
Under 20	8	3.81	3.81
20-29	53	25.24	29.05
30-39	56	26.67	55.71
40-49	46	21.90	77.62
50-59	34	16.19	93.81
60+	12	5.71	99.52
Missing	1	0.48	100.00
Years of Experience (in years)			
5 or fewer	157	74.76	74.76
6-10	15	7.14	81.90
11-15	20	9.52	91.43
16+	18	8.57	100.00
Missing	0	0.00	100.00

Descriptive Statistics: Five Dimensions

Descriptive statistical techniques were used to assess the study's response set data by the five dimensions identified for study purposes. The study's response set data for the five dimensions were addressed using frequencies, measures of central tendency (mean scores), variability (minimum/maximum and standard deviations), standard errors of the mean, and data normality (skew and kurtosis).

Table 2 contains a summary of finding for the descriptive statistical analysis of the study's response data for the five dimensions represented in the study.

Table 2*Descriptive Statistics Summary: Five Dimensions*

Dimension	<i>M</i>	<i>SD</i>	<i>n</i>	<i>SEM</i>	Min	Max	Skewness	Kurtosis
Self-Sacrifice	4.12	0.62	210	0.04	1.80	5.00	-0.70	0.62
Culture	3.90	0.76	210	0.05	1.00	5.00	-0.81	0.76
Nature of Work	4.10	0.53	210	0.04	2.33	5.00	-0.32	-0.02
Motivation	3.88	0.74	210	0.05	1.60	5.00	-0.60	0.29
Job Satisfaction	3.96	0.62	210	0.04	1.60	5.00	-0.72	1.34

Descriptive Statistics: Broad Dimensions

Table 3 contains a summary of finding for the descriptive statistical analysis of the study's response data for the two broad dimensions, hygiene factors and motivator factors, represented in the study.

Table 3*Descriptive Statistics Summary: Broad Dimensions*

Broad Dimension	<i>M</i>	<i>SD</i>	<i>n</i>	<i>SEM</i>	Min	Max	Skewness	Kurtosis
Hygiene Factors	4.04	0.57	210	0.04	2.00	5.00	-0.70	0.80
Motivator Factors	3.92	0.64	210	0.04	1.80	5.00	-0.60	0.74

Missing Data/Survey Completion Rate

The study's extent of missing data and the subsequent survey completion rate were assessed using descriptive statistical techniques. An initial screening of the study's data set was conducted to determine the general intactness of data arrays. As a result, five of the 215 original study participants were removed from participation for significant non-response to the 30 survey

items on the research instrument. Significant non-response, for study purposes, was defined as data missingness per study participant that exceeded 50% for survey items represented on the research instrument. The final, actionable study sample of participants was, therefore, 210.

Upon completion of the initial screening of data, the completion rate for the 30 survey items on the research instrument was 100%, reflecting no missing data points. Missing data at the person level was minimal at 0.48% ($n = 3$) and well within the parameter established by Newman (2014) for data missingness at the person level.

Internal Reliability

The internal reliability of study participant response to the 30 survey items represented on the research instrument was evaluated using Cronbach’s alpha test statistic (Field, 2018). Using the conventions of alpha interpretation proposed by George and Mallery (2019), the internal reliability level achieved using the study’s research instrument was considered excellent at $\alpha = .94$.

A summary of finding for the internal reliability level achieved across all 30 survey items represented on the study’s research instrument is presented in Table 4.

Table 4

Internal Reliability Summary: All Survey Items on the Research Instrument

Scale	No. of Items	α	Lower Bound	Upper Bound
All Survey Items	30	.94	.93	.95

Note. The lower and upper bounds of Cronbach’s alpha were calculated using a 95% confidence interval.

Findings by Research Question

The study's topic and research problem were addressed through the formal statement of three research questions and hypotheses. Descriptive, inferential, and associative/predictive statistical techniques were used to address the study's research questions and hypotheses. The probability level of $p \leq .05$ represented the study's threshold value for findings to be considered statistically significant. Numeric effect sizes achieved in the study's analyses were interpreted using the conventions of effect size interpretation offered by Sawilowsky (2009).

The findings achieved in the study's three research questions and hypotheses are reported.

Research Question 1

To what degree did study participants express their willingness to remain in their current jobs within the rotational molding plastic manufacturing industry?

Hypothesis

There will be a statistically significant response by study participants for perceptions of job retention within the rotational molding plastic industry.

Considering the statistically significant summary response by study participants for job retention within the rotational molding plastic industry, the alternative hypothesis in Research Question 1 was retained.

Analysis

The one-sample t test was used to evaluate the statistical significance of study participants' mean score response to perceptions of remaining in their positions within the plastics industry. The assumption of data normality was assessed through the dependent variable's skew and kurtosis values. The skew value of -0.79 and kurtosis value of 0.14 for the dependent variable of study participant perceptions of remaining in their positions within the

plastics industry were well within the parameters for data normality of $-/+2.0$ for skew and $-/+7.0$ for kurtosis proposed by George and Mallery (2019). Therefore, the assumption of normality in Research Question 1 to use the one-sample t test was satisfied.

Nearly seven in 10 (69.1%) of study participants agreed with the statement that they had no interest in seeking another job. The mean score of 4.11 ($SD = 0.65$) for the summary response variable for perceptions of job retention in the plastics industry was statistically significant, $t(209) = 24.70, p < .001$. The magnitude effect for study participant response was, moreover, considered very large at $d = 1.70$.

Findings

A summary of finding for the analysis of perceptions of employee job retention in Research Question 1 is presented in Table 5.

Table 5

Perceptions of Employee Retention

Variable	<i>M</i>	<i>SD</i>	μ	<i>t</i>	<i>p</i>	<i>d</i>
Employee Job Retention	4.11	0.65	3	24.70	< .001	1.70

Note. Degrees of freedom for the t -statistic = 209. d represents Cohen’s d .

Research Question 2

Considering the dimensions of employee motivation, self-sacrifice, organizational culture, job satisfaction, and nature of work in the organization, which dimension was most associated with and predictive of study participants’ willingness to remain in their current jobs within the rotational molding plastic manufacturing industry?

Hypothesis

The dimension of job satisfaction will represent the most robust, statistically significant correlate and predictor of study participant perceptions of remaining in their positions and not seeking another job.

Considering the superior associative and predictive effect for the dimension of job satisfaction, the alternative hypothesis in Research Question 2 was retained.

Analysis

The MLR statistical technique was used to address Research Question 2. The assumptions associated with the use of MLR were addressed and satisfied by statistical means (independence of error, normality of residuals, multicollinearity, and influential outliers) and visual inspection (linearity and homoscedasticity).

The predictive model used to address Research Question 2 was statistically significant, $F(5, 204) = 59.19, p < .001, R^2 = .59$, indicating that approximately 59.20% of the variance in employee job retention is explainable by the dimensions of self-sacrifice, culture, nature-work, motivation, and job satisfaction. The dimension of motivation was statistically significantly predictive of employee job retention, $B = 0.17, t(204) = 2.27, p = .02$, indicating that, on average, a one-unit increase in perceptions of motivation will increase the value of employee job retention by 0.17 units. The dimension of job satisfaction was statistically significantly predictive of employee job retention, $B = 0.36, t(204) = 4.96, p < .001$, indicating that, on average, a one-unit increase in perceptions of job satisfaction will increase the value of employee job retention by 0.36 units.

Findings

Table 6 contains a summary of finding for the predictive model used for the five dimensions predicting employee job retention in Research Question 2 of the study.

Table 6

Predicting Employee Job Retention by the Dimensions of Self-Sacrifice, Organizational Culture, Nature of Work, Motivation, and Job Satisfaction

Model	<i>B</i>	<i>SE</i>	95% CI	β	<i>t</i>	<i>p</i>
(Intercept)	0.57	0.25	[0.07, 1.07]	0.00	2.26	.025
Self-Sacrifice	0.12	0.09	[-0.05, 0.29]	0.11	1.35	.179
Organizational Culture	0.12	0.07	[-0.02, 0.26]	0.14	1.68	.095
Nature of Work	0.13	0.08	[-0.04, 0.29]	0.10	1.52	.131
Motivation	0.17	0.08	[0.02, 0.32]	0.19	2.27	.024
Job Satisfaction	0.36	0.07	[0.21, 0.50]	0.34	4.96	< .001

Research Question 3

Considering the two broad dimensions of motivational factors and hygiene factors, which was most associated with and predictive of study participants' willingness to remain in their current jobs within the plastics manufacturing industry?

Hypothesis

Motivator factors will exert the greatest associative and predictive effect for employee job retention.

Considering the superior associative and predictive effect for motivator factors, the alternative hypothesis in Research Question 3 was retained.

Analysis

MLR statistical technique was used to address Research Question 3. The assumptions associated with the use of MLR were addressed and satisfied by statistical means (independence of error, normality of residuals, multicollinearity, and influential outliers) and visual inspection of scatter plots (linearity and homoscedasticity).

The predictive model used to address Research Question 3 was statistically significant, $F(2, 207) = 147.52, p < .001, R^2 = .59$, indicating that approximately 58.77% of the variance in employee job retention is explainable by the dimensions of hygiene factors and motivator factors. The dimension of hygiene factors was statistically significant in predicting employee job retention, $B = 0.33, t(207) = 4.21, p < .001$, indicating that, on average, a one-unit increase in hygiene factors will increase the value of employee job retention by 0.33 units. Motivator factors statistically significantly predicted employee job retention, $B = 0.53, t(207) = 7.52, p < .001$, indicating that, on average, a one-unit increase of motivator factors will increase the value of employee job retention by 0.53 units.

Findings

Table 7 contains a summary of the findings achieved in the predictive modeling featured in Research Question 3 of the study.

Table 7

Predicting Employee Job Retention by Broad Dimensions: Hygiene Factors; and Motivator Factors

Model	<i>B</i>	<i>SE</i>	95% CI	β	<i>t</i>	<i>p</i>
(Intercept)	0.68	0.21	[0.26, 1.09]	0.00	3.20	.002
Hygiene Factors	0.33	0.08	[0.18, 0.49]	0.29	4.21	< .001
Motivator Factors	0.53	0.07	[0.39, 0.67]	0.52	7.52	< .001

Summary

Chapter 4 contained the formal reporting of findings achieved in the study. The study's sample of participants was 210. Exceptional levels of study participant survey item completion rate (100%) and internal reliability of response across all 30 survey items ($\alpha = .94$) were observed. A statistically significant response was noted for study participant perceptions of employee job retention within the plastics industry. The dimension of job satisfaction represented the most robust correlate and predictor of study participants' intent to remain in their positions within the plastics industry. Although the broad dimensions of hygiene factors and motivator factors were statistically significant in predicting job retention for study participants, the associative/predictive effect for employee job retention was greater for motivator factors.

Chapter 5 contains a thorough discussion of the study's findings, as reported in Chapter 4.

V. DISCUSSION

The purpose of this study was to determine which of the five factors, culture, job satisfaction, motivation, nature of work, and self-sacrifice, affect employee retention in rotational molding plastic manufacturing. The findings of this study are intended to assist rotational molding organizational leaders in identifying the factors that affect the retention of molders and finishers.

Review of Methodology

The study's research design was considered non-experimental and quantitative. (Kennedy & Edmonds, 2017). A survey research methodological approach was used to specifically achieve the data necessary to address the study's research questions and hypotheses. Survey research was selected for its benefit of acquiring considerable amounts of data on a given topic and for statistical power purposes.

Summary of Results

The study's sample of participants was 210. Exceptional levels of study participant survey item completion rate (100%) and internal reliability of response across all 30 survey items ($\alpha = .94$) were observed. A statistically significant response was noted for study participant perceptions of employee job retention within the rotational molding plastic industry. The dimension of job satisfaction represented the most robust correlate and predictor of study participants' intent to remain in their positions within rotational molding plastic organizations.

Although the broad dimensions of hygiene factors and motivator factors were statistically significant in predicting job retention for study participants, the associative/predictive effect for employee job retention was greater for motivator factors.

Discussion by Research Question

Research Question 1

In Research Question 1, the one-sample t test was used to evaluate the statistical significance of study participants' mean score response to perceptions of remaining in their positions within the rotational molding plastics industry. The assumption of data normality was assessed through the dependent variable's skew and kurtosis values using the conventions of interpretation proposed by George and Mallery (2019). A statistically significant response by study participants for perceptions of job retention within the rotational molding plastic industry was indicated.

Nearly seven in 10 (69.1%) of study participants agreed with the statement that they had no interest in seeking another job. The mean score of 4.11 ($SD = 0.65$) for the summary response variable for perceptions of job retention in the plastics industry was statistically significant, $t(209) = 24.70, p < .001$. The magnitude effect for study participant response was, moreover, considered very large at $d = 1.70$.

Most machine operators and finishers who completed the survey stated they did not have plans to leave their current jobs. Yet, there is an ongoing employee retention issue in rotational molding. It should be noted that 43% of machine operators and finishers who completed the survey had worked less than a year in their current rotational molding job, and 23% of machine operators and finishers who completed the survey had worked in their current positions for 1 to 3 years, and 9% of machine operators and finishers who completed the survey had worked in their current positions 4 to 5 years. Therefore, 74% of machine operators and finishers have worked in rotational molding for 5 years or less. Currently, most individuals have not stayed long-term in

rotational molding production jobs, even though the survey results indicated the participants had no plans to leave.

The survey was completed by 210 individuals; 81% were men, and 18% were women. Most machine operators are male due to the physical strength needed to do the job. Females are mainly found in finishing. Individuals between ages 20-29 years made up 25% of the population surveyed, ages 30-39 years made up 27%, and ages 40-49 years made up 22% of the people surveyed. Therefore, 74% of machine operators and finishers were between the ages of 20-49 years when they completed the survey.

Machine operators and finishers require strength and stamina to work in environmental conditions with increased temperatures due to the extreme heat needed for rotational molding. Manufacturers must keep the rotational molding machines running at temperatures of 450-600 degrees Fahrenheit to make the products. Depending on the organization's geographical location, individuals may also be dealing with high external environmental temperatures.

Owners of rotational molding organizations should look for other ways to protect their employees from the extreme heat. Hydration stations filled with cool water should be located near each machine station. Electrolyte drinks and popsicles should be available to employees; handing out electrolyte drinks and popsicles is an opportunity for supervisors and employers to be seen on the floor, feeling firsthand how hot a production floor can be. Large industrial-size misting fans should be at each machine station in an area where they will not contaminate the plastic powder, and the machine operators can easily access them to cool off between the rounds. A reusable cooling neck wrap, gaiter, or cooling towel can be provided to the employees for repeat use to help with extreme heat. An air-conditioned breakroom with a sizeable industrial ice machine should be available at all hours for individuals to escape the heat, cool off, eat, hydrate, and rest during their breaks. Each employee should be encouraged to bring a large drink container from home to their stations to continue to hydrate during their shifts.

Rotational molders should properly vent the ovens through the roof or walls to release some oven heat directly outside the buildings. Large bay doors can remain open in some geographical areas for cross ventilation. The safety manager should routinely complete

temperature checks of the area near the floor, where the employees stand, and the ceiling. Protecting the individuals who make the products should be a priority. Machines would not be able to run without them.

Research Question 2

Considering the dimensions of employee motivation, self-sacrifice, organizational culture, job satisfaction, and nature of work in the organization, which dimension was most associated with and predictive of study participants' willingness to remain in their current jobs within the rotational molding plastic manufacturing industry?

In Research Question 2, MLR was used to assess the predictive ability of the respective model's independent variables. The assumptions associated with the use of MLR were addressed by statistical means (independence of error, normality of residuals, multicollinearity, and influential outliers) and visual inspection (linearity and homoscedasticity).

The dimension of job satisfaction will represent the most robust, statistically significant correlate and predictor of study participant perceptions of remaining in their positions and not seeking another job.

The predictive model used to address Research Question 2 was statistically significant, $F(5, 204) = 59.19, p < .001, R^2 = .59$, indicating that approximately 59.20% of the variance in employee job retention is explainable by the dimensions of self-sacrifice, culture, nature of work, motivation, and job satisfaction. The dimension of motivation was statistically significantly predictive of employee job retention, $B = 0.17, t(204) = 2.27, p = .02$, indicating that, on average, a one-unit increase in perceptions of motivation will increase the value of employee job retention by 0.17 units. The dimension of job satisfaction was statistically significantly predictive of employee job retention, $B = 0.36, t(204) = 4.96, p < .001$, indicating that, on average, a one-unit

increase in perceptions of job satisfaction will increase the value of employee job retention by 0.36 units.

Kontoghiorghes (2016) believed that employees who saw themselves as part of an organization and felt they added value remained due to job satisfaction. Employees feel valued when supervisors ask for input or help to solve a challenge. Machine operators and finishers are vital resources for an organization. Machine operators run the same rotational molding machines during a shift and get to know the intricacies of the equipment; they know when something is not working correctly, and they can save the organization unnecessary costs by reporting them to the supervisor.

Finishers or individuals in secondary production are also valuable resources. They are artisans who take a molded part and use their talents to shave the parting lines, drill holes for assembly, add hardware, smooth all edges, make the product esthetically pleasing, and are the last person to work on rotationally molded products before they are shipped to the customer. Supervisors who listen to the suggestions and concerns of their finishers can also save the organization extra unnecessary costs. Supervisors who are respectful and support their team members have employees who remain on the job longer. The employee who is included and asked to be a part of the solution will better understand the process and feel they have a voice at the table. Employees who have a good working relationship with their employer and understand goals, directions, and how their work fits into accomplishing those goals are more likely to be satisfied with their jobs. The employees are invested and will work harder to achieve goals set by the employer.

Research Question 3

Considering the two broad dimensions of motivational factors and hygiene factors, which was most associated with and predictive of study participants' willingness to remain in their current jobs within the rotational molding plastic manufacturing industry?

In Research Question 3, MLR was used to assess the predictive ability of the respective model's independent variables. The assumptions associated with the use of MLR were addressed by statistical means (independence of error, normality of residuals, multicollinearity, and influential outliers) and visual inspection (linearity and homoscedasticity).

Herzberg (1966) broke down the motivating factors into two categories: motivational and hygiene factors. Motivational factors included a sense of achievement, growth opportunities, recognition, responsibility, and meaningfulness of work. Hygiene factors included fringe benefits, job security, physical working conditions, status, and pay. Herzberg assumed that employees could be retained by reducing dissatisfaction and maximizing satisfaction.

The first part of Herzberg's (1966) theory stated that certain motivational factors were related to the job content and provided satisfying experiences for employees. These motivational factors were also known as satisfiers and included achievement, recognition, work, responsibility, advancement, and growth (Almaaitah et al., 2017). Satisfaction (and motivation) would occur only as a result of the use of motivators. Herzberg argued that for an employee to be truly motivated, the employee's job had to be fully enriched where the employee had the opportunity for achievement and recognition, stimulation, responsibility, and advancement (Almaaitah et al., 2017).

The second part of Herzberg's (1966) theory stated that hygiene factors that were not job-related factors caused dissatisfying experiences for employees. The factors were known as

hygiene factors or dissatisfiers, which included company policies, salary, co-worker relationships, and style of supervision. However, removing the causes of dissatisfaction did not result in a state of satisfaction. Instead, it resulted in a neutral state (Herzberg, 1966). Managers who sought to eliminate factors that created job dissatisfaction potentially brought about peace, but not necessarily motivation. The workforce was placated rather than motivated.

The predictive model used to address Research Question 3 was statistically significant $F(2, 207) = 147.52, p < .001, R^2 = .59$, indicating that approximately 58.77% of the variance in employee job retention is explainable by the dimensions of hygiene factors and motivator factors. Hygiene factors were statistically significant in predicting employee job retention; on average, a one-unit increase in hygiene factors will increase the value of employee job retention by 0.33 units.

Motivator factors statistically significantly predicted employee job retention, $B = 0.53, t(207) = 7.52, p < .001$, indicating that, on average, a one-unit increase of motivator factors will increase the value of employee job retention by 0.53 units. Motivator factors will exert the greatest associative and predictive effect on employee job retention.

Employers should get to know their employees, find out what motivates them, and put special incentives in place during the workday. Internally motivated individuals are self-driven; these machine operators and finishers take pride in creating a quality product and seeing their product used in the community. Employees are motivated to work harder when their supervisor is pleased with their work. Internally motivated employees who clearly understand an organization's values, vision, and mission statement are motivated to work toward a common goal and put forth their best efforts to accomplish an organization's objectives. Supervisors can motivate their employees by giving specific feedback to help educate, mentor, and encourage

individuals. Supervisors who take time to work alongside and support internally motivated individuals will create a sense of teamwork and belonging. An act of kindness, a compliment, and a moment of time spent listening to the employee will contribute greatly towards motivating an individual to work a little harder.

An externally motivated employee will respond to awards, recognition, financial compensation, and extra employee benefits. Employers can recognize the accomplishments of employees publicly at a luncheon, gathering, on social media, or in a community publication. Monetary awards or extra time off for employees once a company goal is achieved are external motivators. Individualized recognition on an employee's birthday or work anniversary makes people feel valued and motivates an employee to remain on the job.

Behavior modification programs will incentivize externally and internally motivated employees. The program should be explained and understood for it to be most effective. A point system that allows for positive reinforcement and awards is a motivator, although many companies use a point system as punishment focusing on negative behaviors. A behavior modification system focused on the negative may address the immediate issue but will not motivate individuals long-term.

Study Limitations

Finding prior studies specific to employee retention in rotational molding plastic manufacturing proved unsuccessful. The researcher searched databases from three universities and could not find the necessary resources. The narrow perspective had to be broadened initially to a more generalized topic of study focusing on the individual critical factors in isolation: culture, job satisfaction, motivation, nature of work, and self-sacrifice. The data collected stemmed from five previously used surveys conducted in other scientific studies. Five questions

were explicitly chosen from each general survey to measure culture and employee retention, job satisfaction and employee retention, motivation and employee retention, nature of work and employee retention, and self-sacrifice and employee retention.

The survey was written in English and Spanish because the researcher found that half of the machine operators and finishers surveyed communicated in Spanish. It was discovered that some employees needed assistance to read and complete the survey even though the survey was written with the target audience in mind. Five online surveys were returned with incomplete information. The researcher found that the best return of surveys occurred when employees were given a paper copy in their primary language and allowed time to complete it while at work.

The researcher used a quantitative, Likert-type survey distributed to machine operators and finishers across the United States. This allowed for geographically expansive results, but a qualitative study would have potentially uncovered information in greater detail due to open-ended questioning, leading to further in-depth discussion.

Implications for Future Practice

Most organizations seek to formulate effective employee retention strategies that will enable them to retain employees they consider critical to attaining organizational goals and the high financial cost of losing an employee (Chiboiwa et al., 2010). It is in the employer's best interest to get to know their employees. Observing and listening to those working the machines and finishing the products will enable employers to proactively uncover potential issues.

Stone et al. (2009) stated that employees who felt their supervisors heard them and valued their input tended to remain on the job longer. Employers should schedule a time to be available for their employees daily by getting out of the office and on the production floor. Often, the smallest gesture (a smile, a wave, a greeting) contributes to the employees' feeling valued and noticed by employers, leading to job satisfaction, which motivates employees to work harder and remain on the job longer.

The Bureau of Labor Statistics (2019) estimated that it costs about 33% of a recruit's salary to replace a lost employee. On average, it costs employers \$11,000 in direct training expenses and lost productivity to replace an experienced employee making \$33,000. The private industry estimates that highly skilled jobs experience turnover losses at a much higher level, up to 150% of the position's annual salary. High employee turnover rate in plastic manufacturing impacts all stakeholders. The loss of a trained and experienced workforce means unskilled individuals in each department are expected to complete tasks without the confidence that years of on-the-job training would establish. Rotational molding requires skilled individuals to work as machine operators and finishers. The Bureau of Labor Statistics (2020) has stated that HR departments within the plastic industry are continually searching for qualified individuals to fill positions, retain employees, and decrease the financial cost and time invested in the constant turnover of a new labor workforce. The challenge of employee retention continues to be one of the top concerns of rotational molding plastic manufacturers year after year.

Recommendations for Future Research

Future research studies should focus on job satisfaction and the significant impact on employee retention in rotational molding plastic manufacturing organizations. Secondly, motivated employees appear to be satisfied with their jobs and have no desire to leave the workplace. Therefore, it is also essential to study motivation knowing it significantly affects employee retention. Manufacturers continue to search for a solution to employee retention challenges due to the financial burden of recruiting, advertising, interviewing, screening, and hiring costs for new individuals. The price of onboarding a new employee includes training and management's time. Training new employees increases the scrap rate and decreases productivity; the financial cost to the organization is immense. Reliable and skilled employees are expected to

do extra work by staying later or working extra shifts to maintain production and meet deadlines. By retaining qualified employees, production rates will increase, quality products will be made, and the financial benefits to rotational molding manufacturing organizations will be recognizable. Panday and Kaur (2022) stated that the success of any organization depends on the quality of its human capital.

Conclusion

This research is significant in its contribution to rotational molding plastic manufacturing due to the absence of other studies specific to employee retention in the industry. The rotational molding process is a manually driven process that requires skilled machine operators to produce the molded part and artisans to perform secondary operations (finishing) to finalize all aspects of the product. Attracting individuals to work in the manufacturing sector has invariably proven to be difficult. This, coupled with the harsh work environment of rotational molding, continues to negatively impact employee retention in rotational molding plastic manufacturing.

The most valuable asset of an organization is its employees. Employees feel motivated to perform a task when supervisors value them. Supervisors who take the time to listen, ask for input, and work alongside machine operators and finishers tend to motivate individuals to work harder and be more productive. Individuals who are motivated report job satisfaction and remain on the job. Employee retention is a critical area of concern for employers; therefore, research should be continued to address the issue of employee retention in rotational molding organizations.

References

- Almaaitah, M. F., Harada, Y., Sakdan, M. F., & Almaaitah, A. M. (2017). Integrating Herzberg and social exchange theories to underpinned human resource practices, leadership style and employee retention in health sector. *World Journal of Business and Management*, 3(1), 16-34.
- Association of Rotational Molders. (2021). *About ARM*. <https://www.rotomolding.org>
- Benton, A. (2016). Understanding the diverging paths of stayers and leavers: An examination of factors predicting worker retention. *Children and Youth Services Review*, 65(6), 70-77.
- Boateng, G. O., Neilands, T. B., Frongillo, E. A., Melgar-Quiñonez, H. R., & Young, S. L. (2018). Best practices for developing and validating scales for health, social, and behavioral research: A primer. *Frontiers in Public Health*, 6(149).
<https://doi.org/10.3389/fpubh.2018.00149>
- Bureau of Labor Statistics. (2019). National industry-specific occupational employment and wage estimates. <http://www.bls.gov>
- Bureau of Labor Statistics. (2020). National industry-specific occupational employment and wage estimates. <http://www.bls.gov>
- Chiboiwa, M. W., Samuel, M. O., & Chipunza, C. (2010). An examination of employee retention strategy in a private organization in Zimbabwe. *African Journal of Business Management*, 4(10), 2103 -2109.
- Chukwuma, E. M., & Okafor, O. (2014). Effect of motivation on employee productivity: A study of manufacturing companies in Nnewi. *International Journal of Managerial Studies and Research*, 2(7). <http://doi.org/2349-0349>
- D & M Plastics. (2017). *What is rotational molding?* <http://www.rotationalmoulding.ca>

- Delle, E., & Kumasey, A. S. (2013). To stay or not to stay: Can organizational culture provide the staying power? Evidence from the Ghanaian banking sector. *Research on Humanities and Social Sciences*, 3(19), 46-52.
- Dura-Cast Products. (2019). *Why dura-cast/process*. <https://www.duracast.com>
- Field, A. P. (2018). *Discovering statistics using IBM SPSS statistics*. SAGE.
- George, D., & Mallery, P. (2019). *IBM SPSS statistics 26 step by step: A simple guide and reference* (16th ed.). Routledge. <https://doi.org/10.4324/9780429056765>
- Ghani, B., Zada, M., Memon, K. R., Ullah, R., Khattak, A., Han, H., Ariza-Montes, A., & Araya-Castillo, L. (2022). Challenges and strategies for employee retention in the hospitality industry: A review. *Sustainability*, 14(5), 2885. <https://doi.org/10.3390/su14052885>
- Gomba, C. (2015). Why do they stay: Factors influencing teacher retention in rural Zimbabwe. *International Journal of Instruction*, 8(2), 55-68.
- Habib, S., Aslan, S., Hussain, A., Yasmeen, S., & Ibrahim, M. (2014). The impact of organizational culture on job satisfaction, employee commitment, and turnover intentions. *Advances in Economics and Business*, 2(6), 215-222.
- Hale, J. (1998). Strategic rewards: Keeping your best talent from walking out the door. *Compensation and Benefits Management*, 14(3), 39-50.
- Herzberg, F. (1966). *Work and the nature of man*. World Publishing.
- Heyman, F. (2008). How wage compression affects job turnover. *Journal of Labor Research*, 29(1), 11-26.
- Idowu, S. A. (2020). Role of flexible working hours' arrangement on employee job performance and retention in manufacturing industries in Agbara, Nigeria. *Economic Insights Trends and Challenges*, 9(72), 23-37.

- Ijah, A. (2013). The influence of motivation on employees' performance: A study of some selected firms in Anambra state. *An International Journal of Arts and Humanities*, 2(3), 134-151.
- Jarupathirun, S. & DeGennaro, M. (2018). Factors of work satisfaction and their influence on employee turnover in Bangkok, Thailand. *International Journal of Technology*, 9(7), 1460-1468.
- Kennedy, T. D., & Edmonds, W. A. (2017). *An applied guide to research designs: Quantitative, qualitative, and mixed methods*. SAGE.
- Kontoghiorghes, C. (2016). Linking high performance organizational culture and talent management: Satisfaction/motivation and organizational commitment as mediators. *The International Journal of Human Resource Management*, 27(16), 1833-1853.
- Kossivi, B., Xu, M., & Kalgora, B. (2016). Study on determining factors of employee retention. *Open Journal of Social Sciences*, 4, 261-268.
- Leners, D., Roehrs, C., & Piccone, A. (2006). Tracking the development of professional values in undergraduate nursing students. *Journal of Nursing Education*, 45(12), 504-511.
- Manufacturers Association for Plastics Processors. (2017). *State of the industry report*.
<https://www.mappinc.com/resources/benchmarking-publications/>
- Maslow, A. H. (1954). *Motivation and personality*. Harper and Row.
- McClelland, D. C. (1985). How motives, skills, and values determine what people do. *American Psychologist*, 40(7), 812-825.
- Memili, E., & Barnett, T. (2008). Non-family employees' perceptions of person-organization fit and voluntary turnover in family firms. *Academy of Management Proceedings*, 2008(1), 1-6.

- Michael, B., Prince, A. F., & Chacko, A. (2016) Impact of compensation package on employee retention. *International Journal of Research in Commerce and Management*, 7(10), 36-40.
- Mita, M., Aarti, K., & Ravneeta, D. (2014). Study on employee retention and commitment. *International Journal of Advance Research in Computer Science and Management Studies*, 2, 154-164.
- Mitrovska, S., & Eftimov, L. (2016). Calculating the cost for employee turnover in the IT industry in Macedonia by using a web calculator. *Journal of Human Resource Management*, 19(1), 24-33.
- Mohan, A. K. (2019). A study on factors influencing employee retention in the hotel industry in Tamilnadu. *International Research Journal of Management and Commerce*, 5(3), 1-11.
- Moore, S. J., Durst, P. T., Ritter, C., Nobrega, D., & Barkema, H. W. (2020). Effects of employer management on employee recruitment, satisfaction, engagement, and retention on large US dairy farms. *Journal of Dairy Science*, 103(9), 8482-8493.
- Nair, S. S. (2009). *Employee retention*. <http://www.articlesbase.com/human-resouces-articles/employee-retention-995426.html>
- Nix, T. (2014, August 20). Trends in compensation and operational practices for plastic processors. *Plastic Business*. <https://plasticsbusinessmag.com/articles/2014/trends-in-compensation-and-operational-practices-for-plastic-processors/>
- Nnabuike, E. K. (2009). *Organizational behavior and management theory*. Rex Charles and Patrick, Ltd.

- O'Reilly, C. A., Chatman, J., & Caldwell, D. F. (1991). People and organizational culture: A profile comparison approach to assessing person-organization fit. *Academy of Management Journal*, 34(3), 487-516.
- Osibanjo, O. A., Adeniji, A. A., Falola, H. O., & Heirsmac, P. T. (2014). Compensation packages: A strategic tool for employees' performance and retention. *Leonardo Journal of Sciences*, 25, 65-84.
- Panday, P., & Kaur, G. (2022). Factors contributing to talent management and its relation to employee retention in the manufacturing sector: A study of technical employees in India. *SCMS Journal of Indian Management*, 19(1), 56-67.
- Pandu, G. A., & Sankar, R. (2019). Factors influencing retention of manufacturing industry employees in Tamil Nadu and Puducherry. *International Journal of Business Ethics in Developing Economies*, 8(2), 28-38.
- Pittano, D., Visintin, F., Lenger, T., & Sternad, D. (2016). Are high performance work practices really necessary in family SME's? An analysis of the impact on employee retention. *Journal of Family Business Strategy*, 7(2), 75-89.
- Ratzlaff, J. D. (2004). *Polyethylene: Process sensitivity in rotational moulding*. Chevron Phillips Chemical Company, L. P.
- Remijus, O. N., Chinedu, O. F., Maduka, O. D., & Ngige, C. D. (2019). Influence of organizational culture on job satisfaction and workers retention: A study of selected banks in Anambra State. *International Journal of Management and Entrepreneurship*, 1(1), 83-102.
- Ruggieri, S., & Abbate, C. S. (2013). Leadership style, self-sacrifice, and team identification. *Social Behavior and Personality: An International Journal*, 41(7), 1171-1178.

- Sarmad, M., Ajmal, M., Shamim, M., Saleh, M., & Malik, A. (2016). Motivation and compensation as predictors of employees' retention: Evidence from public sector oil and gas selling organizations. *Journal of Behavioural Sciences*, 26(2), 174-178.
- Saunders, M., Lewis, P., & Thornhill, A. (2016). *Research method for business students* (7th ed.). Pearson Education.
- Sawilowsky, S. S. (2009). New effect size rules of thumb. *Journal of Modern Applied Statistical Methods*, 8(2), 26.
- Shujahat, M., Ali, B., Nawaz, F., Durst, S., & Kianto, A. (2018). Translating the impact of knowledge management into knowledge-based innovation: The neglected and mediating role of knowledge-worker satisfaction. *Human Factors and Ergonomics in Manufacturing & Service Industries*, 28(10).
- Stone, D. N., Deci, E. L., & Ryan, R. M. (2009). Beyond talk: Creating autonomous motivation through self-determination theory. *Journal of General Management*, 34(3), 75-91.
- Subramaniam, C., Choo, L. C., & Johari, J. (2019). What makes employees want to stay? A study in the Malaysian manufacturing sector. *Global Business and Organizational Excellence*, 38(5), 33-43.
- Toloken, S. (2017, February 10). *Survey: 9 in 10 processors say workforce top issue for 2017*. Plastic News, <http://www.plasticsnews.com/article/20170210/NEWS/170219988/survey-9-in-10-processors-say-workforce-top-issue-for-2017>
- Umamaheswari, S., & Krishnan, J. (2016). Work force retention: Role of work environment, organization commitment, supervisor support and training, and development in ceramic sanitary ware industries in India. *Journal of Industrial Engineering and Management*, 9(3), 612-633.

Yadav, P., Yadav, A., Bhati, B., & Agarwal, P. (2020). A study on employee retention and turnover in India. *Mukt Shabd*, 9(6), 135-141.

Appendix A

Adult Consent Form

ADULT CONSENT FORM SOUTHEASTERN UNIVERSITY

PROJECT TITLE:

Employee Retention in Plastic Manufacturing Organizations

INVESTIGATORS:

Paula Orcutt, Doctorate Student, Southeastern University, Lakeland, Florida

Dr. Lisa Coscia, College of Education at Southeastern University, Lakeland, Florida

Dr. Thomas Gollery, College of Education at Southeastern University, Lakeland, Florida

PURPOSE:

This study will examine the factors which motivate employees to remain in rotational molding organizations. This study will also identify the relationship between Herzberg's motivation-hygiene theory and employee retention in rotational molding plastic manufacturing organizations. Employers look to retain employees to decrease the financial and time invested in turnover of a new labor workforce.

PROCEDURES:

You will be given time to answer a thirty-question survey with the option to complete it online or in print. The survey is designed to last approximately 10 minutes. Results of the survey will be analyzed by researcher Paula Orcutt, shared with members of the Southeastern University College of Education, and used to assist organizational leaders with employee retention in the field of rotational molding.

RISKS OF PARTICIPATION:

There are no known risks associated with this project which are greater than those ordinarily encountered in daily life.

CONFIDENTIALITY:

The records of this study will be kept private. Any written results will be discussed as group findings and will not include information that will identify you. Research records will be stored on a password-protected computer in a locked office and only researchers and individuals responsible for research oversight will have access to the records. Records will be deleted after five years.

COMPENSATION:

Compensation will not be given in exchange for completing the survey

CONTACTS:

You may contact any of the researchers at the following email addresses, should you desire to discuss your participation in the study and/or request information about the results of the study.

Paula Orcutt, Doctorate Student, Southeastern University, Lakeland, Florida,
prorcutt@seu.edu

Dr. Lisa Coscia, College of Education at Southeastern University, Lakeland, Florida,
lacoscia@seu.edu

Internal Review Board, College of Education at Southeastern University, Lakeland,
Florida, irb@seu.edu

PARTICIPANT RIGHTS:

I understand that my participation is voluntary, that there is no penalty for refusal to participate, and that I am free to withdraw my consent and participation in this project at any time, without penalty.

CONSENT DOCUMENTATION:

I have been fully informed about the procedures listed here. I am aware of what I will be asked to do and of the benefits of my participation. I also understand the following statements:

I affirm that I am 18 years of age or older.

I have read and fully understand this consent form. I sign it freely and voluntarily. A copy of this form will be given to me. I hereby give permission for my participation in this study.

Signature of Participant

Date

I certify that I have personally explained this document, or a member of the Human Resource department explained this document before requesting that the participant sign it.

Signature of Researcher

Date

Appendix B

Plastic Manufacturing Employee Retention Survey

By completing the survey, you are agreeing to participate in the doctoral research study. Your responses will be kept strictly confidential. Put a checkmark on the line that best describes you. Thank you for your time.

Sex:

Female

Intersex

Male

Not Listed: _____

Prefer not to reply

Length of service:

Less than 1 year

1-3 years

4-5 years

6-10 years

11-15 years

16-20 years

Over 20 years

Age Group:

_____ Less than 20 years

_____ 20-29 years

_____ 30-39 years

_____ 40-49 years

_____ 50-59 years

_____ Over 60 years

Circle the answer that best represents your initial response for each statement.

Self-Sacrifice

I like my work schedule.

5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

I am treated fairly at work.

5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

I like that overtime is available.

5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

I am willing to put in extra work to help others.

5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

I am treated like family.

5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

Culture

I have opportunities to give my opinion on matters important to me.

5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

Employees are treated fairly.

5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

I am proud to be an employee at my current job.

5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

I work in a positive environment.

5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

The company does an excellent job of keeping employees informed.

5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

Nature of Work

I go beyond what is expected of me.

5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

I am provided the tools and equipment to do my job.

5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

My job is physically demanding.

5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

I feel safe in my work environment.

5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

My job requirements are clear.

5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

My physical space allows me to work efficiently.

5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

Motivation

My work gives me a feeling of accomplishment.

5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

I am rewarded and recognized by my supervisor.
5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

I want to help my company succeed.
5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

I feel valued.
5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

I have an opportunity for advancement.
5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

Job Satisfaction

I feel very satisfied when I think about my job.
5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

I am an essential part of the company.
5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

My relationship with my co-workers is a reason I stay on the job.
5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

I enjoy working in rotational molding.
5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

I get a sense of personal accomplishment from my work.
5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

Employee Retention

I have no interest in searching for a job.
5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

I would encourage my friends to work here.
5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

I would like to see the company succeed.

5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree

I have a good work life balance.

5- Strongly Agree 4- Agree 3- Uncertain 2- Disagree 1- Strongly Disagree