



* OREDO -RXUQDO RI 1XUVLQJ

&DQ DQG \$N\RO *ORE - 1XUV)RUHQVLF

5HVHDFK \$UWLFOH

20,&6 ,QWH

7BMJEJUZ BOE 3FMJBCJMJUZ PG UIF 5VSLJTI 7 PG -JGF -%20- *OTUSVNFOU

%HOJDU SHUDQDQSVL\H 'XUPD] \$N\RO

,QWHUQDO 0HGLFLQH 1XUVLQJ (JH 8QLYHUVLW\)DFXOW\ RI 1XUVLQJ ,]PLU 7XUNH\

&RUUHVSRRGLQ\$D\XWKRUPD] \$N\RO ,QWHUQDO 0HGLFLQH 1XUVLQJ (JH 8QLYHUVLW\)DFXOW\ RI 1XUVLQJ
DVL\H GXUPD]#HJH HGX WU

5HFHLYHG GDWH 1RYH\$FEHSWHG GDWH 1RYH\$REBUVKHG RYDHPHU

&RSULJKW &DQ %6 7KLV LV DQ RSHQ DFFHVV DUWLFOH GLVWULEXWHG XQGHU WKH WHUPV RI WKH &UH
GLVWULEXWLRQ DQG UHSURGXFWLRQ LQ DQ\ PHGLXP SURYLGHG WKH RULJLQDO DXWKRU DQG VRXUFH DUWLFOH

\$EVWUDFW

2EMHFV&KURQLF OLYHU GLVHVDH DIIHFVW SK\VLFDQ SV\FKRORJLFDO VRFLDO
HIIHFVW LQ GLIIHUHQW OHYHOV %HFDXVH RI WKHVV SUREOHPV WKH VSHFLILF QD
LQVWUXPHQW 6SHFLILF LQVWUXPHQWV SURYLGH IRU QXUVHV WR FDSWXUH WKH
LQWHUYHQWLRQV WR FOLHQW DQG GLVHVDH

'HVLJQ \$ FURVV VHFWRUQDO DQG PHWKRGRORJLFDO GHVLJQ

0HWKRGV 7KH VWXG\ GDWD ZDV FROOHFWHG IURP SDWLHQWV ZLWK FKURQ
LQVWUXPHQW ZDV H[DPLQHG ZLWK WUDQVODWLRQ SURFHGXUHV IDFH YDOLGLW\
UHOLDELOLW\ RI LQVWUXPHQW ZDV H[DPLQHG ZLWK WHVW UHWHVW UHOLDELOLW\ D

5HVXOWV VKRZHG WKDW IDFWRU DQDO\VLV FRQVLVWHG RI OHYHOV ZKLFK DUH
6RFLDO &RJQLWLYH KHDOWK \$ QHJDWLYH UHODWLRQ ZDV IRXQG EHWZHHQ WKH
LQVWUXPHQW U í S 7KH WHVW UHWHVW UHOLDELOLW\ RI LQVWUXPHQW
FRQVLVWHQF\ &URQEDFK \$OID &RHILFLHQW RI /'42/ KDG JRRG OHYHO DQG LW Z

&RQFOXVLRQ \$W WKH HQG RI VWXG\ 3/'42/ ZDV IRXQG WKDW LW LV YHU\ UHO
VRFLHW\ LQ FKURQLF OLYHU GLVHVDH

.H\ZRUGXDOLW\ RI OLIH &KURQLF OLYHU GLVHVDH ZEWGLORELVOLW\ R9DOLGLW\
DWLYLWLHV > @

,QWURGXFWRQ

&KURQLF OLYHU GLVHVDH DQG FLUURJLQV IRFXVHG RQ WKH WUHDY
FRQVXPSWLRQ YLUDO KHSDWLWLV RU QRO DDFRROF IDWW42/ LQVWUXPHQW RI QK
DUH SUHYHQWDEOH OHDG WR SUHYLDOLW\ DOLW > @ EHWZHHQ HWLROORJL
HVRORJLF FDXVHV LV FORVHO\ UHODWHG CHWRQXW XUDOD DQG HFFRPSDFW UHODWHG
7XUNH\ QYLDLQGHQ SDGLV RULKHWKOWR DDFRROF IDWW42/ > HPPWLRQDO DQG V
&

KURQLF OLYHU GLVHVDHGLZHWKPYDULFSWRPVRGRJLHV
KURQLF KHSDWLWLV WR GMERPSHQVDPSHGRPYLUKRYLV
HSVHFLDOODWKHFWRQH\XDOLW\ RI OLIH YDU\ORVW SDWLHQWV FD
UHPDLQ DV\PSWRPDWLF XQWLO GHFRPSRPSLWYH FLUURJLQV HSHUHQWLVFKDQJHV LQ
VWXGLHV SDWLHQWV ZLWK GHFRPSHQVDPSHGRPYLUKRYLV UHSRURWHG VRRQJWV
+542/ ZKLFK LV IROORZHG E\ SDWLHQWV ZLWK GHFRPSHQVDPSHGRPYLUKRYLV LQ
LQWHJUDWLRQ LQWR SUDFWLFH RI YDOLG

SDWLHQW UHSRUWHG RXWFRPHV VXFV DV WKH KHDOWK JDLQ DQG TXDOLW\ RI OI
EHQHRYV FDUH WR SDWLHQWV DQG WKHLU IDPLOLHV > @ +RZHYHU WKHUH LV
QRW D YDOLGDPHQ DQG UHOLDEOH LQVWUXPHQW WR GHWHUPLQH WKH TXDOLW\ I
RI WKH SDWLHQWV ZLWK FKURQLF ROLYHU GLVHDPV LQ 7XUNH\
7XUNH\ LW LV XQOLNHO\ IRU QXUVHV FDULQJ IRU SDWLHQWV ZLWK FKURQLF OLY
GLVHDPV WR GHWHUPLQH WKH SDWLHQWV QHHGV DQG WR HYDOXDWH WKH UHVX
QXUVLQJ DFWLYLWLHV WKH\ DSSO\
H

\$LP RI WKH 6WXG\
H

H DLP RI WKLV VWXG\ ZDV WR HVWDEOLVK WKH SV\FKRPHWULF SURSHUWLHV
LQFOXGLQJ YDOLGLW\ UHOLDELOLW\ DQG VHQVLWLYLW\ RI D 7XUNLVK YHUVLRQ
/LYHU 'LVHDPV 4XDOLW\ RI /LIH ,QVWUXPHQW /'42/ WR 7XUNLVK
SDWLHQWV ZLWK FKURQLF OLYHU GLVHDPV
H

OHWKRGV
H

3DUWLFLSDWHG VHWWLQJV
H

\$ FURVV VHFWRQRDO DQG PHWKRGRORJLFDO GHVLJQ ZDV XVHG LQ WKH VWXG\
H UHVHDFK ZDV WRRN SODFH DW RXW SDWLHQW FOLQLF RI +HSDWRORJ\
'HSDUWPHQW RI *DVWURHQWHURORJ\ 6FKRRO RI OHGLFLQH DW (JH 8QLYHUVLW\
LQ ,]PLVKRVSLWDO KDV H KRVSLWDO SDWLHQW VHUFLFHG
SDWLHQWV UHFHLYHV RXW SDWLHQW FDUH DQG SDWLHQWV UHFHLYHV
LQ SDWLHQW UHFHLYVLRQ FULWHULD RI WKLV KRVSLWDO DUH WR EHLQJ WKH
ELJJHVW KRVSLWDO LQ \$HJDQ UHJLRQ ,Q DGGLWLRQ *DVWURHQWHURORJ\
GHSDUWPHQW KDV D KHSWRORJ\ RXW SDWLHQW FOLQLF LQ WKLV KRVSLWDO
H

H

3URFHGXUHV

'DWD FROOHFWLRQ ZDV E\ IDFH WR IDFH LQWHUYLHZ ZLWK WKH VWURNH SDWLHQ
 LQ RXWSDWLHQWV LQ RXWSDWLHQWV LQ RXWSDWLHQWV LQ RXWSDWLHQWV LQ RXWSDWLHQWV
 ZDV XVHG WR FROOHFWLRQ GLYLGLXDOO\
 DSSURDFKHG SDWLHQWV WR GHVFULEH WKH VWXG\ DQG REWDLQ YHUEDOO\
 LQIRUPHG FRQVHQW EHIRUH VWDUW TXHVWLRQQDLUH 5HVHDFKHUV LQIRUPHG
 YHUEDOO\ DOO SDWLHQWV DERXW WKH DLP RI UHVHDFK 7R GHFODUH WKHLU
 ZLOOLQJQHVV ZULWWHQV SURRQJJDWLRLQ WDNWQ
 WKH\ ZHUH DEOH WR ZLWKGUDZ IURP VWXG\ DW DQ\ WLP

	8QLWV	3RLQW	3RLQW	3RLQW
+HSDWLF HQFHSKDOR	SDWK\	\$EVHQW	WLOG	\$GYDQFHG FRPD
\$VFLWHV		\$EVHQW	&RQWUR	GHUFWRU\
7RWDO ELOLUXELQ	VHU&P	!		

6HUXP DOEXBLQ !

3URWURPELQ, WLP

VHFRQGV SURRQJJDWLRLQ !

&73 &ODVV \$ WR SRLQWV &73 &ODVV % WR SRLQWV &73 &ODVV & WR
 SRLQWV

)DFWRU FRJQLWLYH VRFLDO KGH)QMG GLPHQVLRQ ZDV
VXEVDQHV LQFOXGLQJ PHPRU\ FRQFHQWUDWLRQ DQG TXDOLW\ RI VRFLDO
LQWHUDFWLRQ

7RWDO DPRXQW RI H[SODLQHG YDULDQFH IRU WKHVH IDFWRUV ZDV
+RZHYHU WKH HLJHQYDOXH RI WKH)DFWRU ZDV REVHUYHG :KHQ LW ZDV
UHPHYHG IURP WKH LQVWUXPHQW WKH WRWDO H[SODLQHG YDULDQFH RI WKH
LQVWUXPHQW ZDV UHGXFHG WR ([SORUDWRU\ IDFWRU DQDO\VLV ZLWK
SURPD[REOLTXH URWDWLRQ ZDV FRQGXFWHG WR DVVHVV WKH FRQVWUXFW YDOL
RI LQVWUXPHQW)DFWRU ORDGLQJV DQG HLJHQYDOXHV ZHUH GHVFULEHG LQ 7DE

&KDUDFWHULVWLFV 1 0HDQ
\$JHV \HDUV

*HQGHU
0HQ
:RPHQ
0DULWDO VWDWXV
0DUULHG
6LQJOH
:LGRZHG
'LYRUFHG
(GXFDWLRQDO 6WDWXV
(OHPHQWU\ VFKRRO
+LJK VFKRRO
8QLYHUVLW\
(WLRORJLHV
+%9
+&9
3%&
\$XWRLPPXQH
&U\LSWRJHQLF
%XGG FKLDUL
\$OFRKROLF OLYHU GLVHDVH
&73 FODVVLILFDWLRQ
&KLOG \$
&KLOG %

'LVFXVVLQR

&KURQLF OLDHUSOVLHHDVH LQ PDQ\ ZD\ 3DWLHQWV KDYH WR
GHDO ZLWK ERWK WKH SK\VLFDQ SUREOHPV DQG SKV\FKRORJLFDQ VRFLDO
HFRQRPLF SUREOHPV DFW\HGLFDQWV WGH\PHQWV KDYH
D QXPEHU RI OLPLWDWLRQV RI ZKLFK WKH PRVW LPSRUWDQW LV WKDW WKH\ GR
QRW DORZV SHFWV RI D GLVHDSH WR EH VWXGLHG

)DFWRU ORDGLQJV	(LJHQYDOXH
)DFWRU	
6\PSWRPV RI OLYHU GLVHDSH	
(IHFVW RI OLYHU GLVHDSH	
6H[XDO IXQFWLRQ	
6OHHS	
)DFWRU	
+HDWK GLVWUHV	
/RQHOLQHVV	
+RSHOHVVQHVV	
6WLJPD RI OLYHU GLVHDSH	
)DFWRU	
&RQFHQWUDWLRQ	
0HPRU\	

7RWDO RI YDULDQFH H[SODLQH DOSKD ,&&

0HDQ 6FRUHV &URQEDFKCV
6XEVDH RI /'42\ 6' ,&&

6\PSWRPV RI OLYHU GLVHDSH

(IHFVW RI OLYHU GLVHDSH

&RQFHQWUDWLRQ

0HPRU\

4XDOLW\ RI VRFLDO LQWHUFWLRQ

+HDWK GLVWUHV

6OHHS

/RQHOLQHVV

+RSHOHVVQHVV

6WLJPD RI /LYHU GLVHDSH

6H[XDO IXQFWLRQ

6H[XDO SUREOHPV

7RWDO

S 6H[XDO SUREOHPV VXEVDH ZDV HYDOXDWHG LQ LWVHOI S

